

Issue 309

# Good

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- Eric Simonds' wacky bird boxes
- Les Thorne turns two burr oak vases

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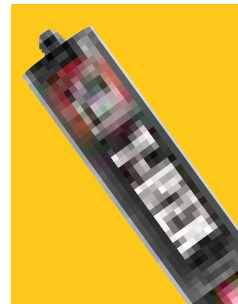
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*'Some of my favourite things from this issue'*

# Welcome

I have to admit that I've learnt a lot in the last month, and the lesson that strikes me as being particularly relevant to this issue is that of planning, and being prepared when things go wrong, as they inevitably do! Juggling so many different tasks is certainly testing at times, but mostly downright enjoyable, otherwise I wouldn't choose to do what I do. The tricky customer I'm alluding to here is the Shed of the Year winners feature, which was due to appear in this issue. However, due to unforeseen circumstances, this sadly won't actually be appearing until GW310. Apologies to all who were eagerly anticipating the unveiling, and I do hope you consider the article we've got in store for you worth the wait.

## Make furniture, win great prizes

We have got a fantastic competition starting this month, which gives you the chance to win some truly amazing prizes. As some of you may already know, 2016 sees the Felder Group celebrating its 60th anniversary, and what better way to celebrate than by running a great competition and inspiring creativity among the readers? We were very excited to hear about plans to run this competition when we went to meet the Felder bosses at their UK premises, and especially thrilled to learn that they are also championing and nurturing young furniture-making talent. Running over the next six issues, this competition is slightly different from the norm in that it requires you, the reader, to design and make your own piece of furniture from scratch. Entrants are asked to document the making from start to finish, as well as taking step-by-step photos of the process. Five finalists

will be chosen from all those who enter and their work will be judged by an expert panel consisting of professionals John Lloyd and Peter Sefton, who will pick the first, second and third place winners. The prizes on offer are very special, so if you think you've got what it takes to win, then turn to **page 28** to find out how you can enter. Good luck to all and we can't wait to see what you make!

## Back by popular demand

Back by popular demand is our readers' gallery section, which has been added to the letters page. Unfortunately the Alcolin glue giveaway, which is due to run in conjunction with this, has been delayed due to problems with sourcing the product. However, I'm assured stock will be ready in time for GW310, so please do keep sending in photos of all the unique and wonderful projects you've been making in the meantime.

## Ticking the boxes

In terms of what you can expect from this issue, we reckon there's something to tick just about every box. We've got two brand-new technical series for you, a host of projects to suit just about every skill level, some fun features that will certainly put a smile on your face, and to top it all off, Andy King has some great kit & tool recommendations to suit a variety of budgets. **GW**

Enjoy!

*Tegan*

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*We endeavour to ensure all techniques shown in Good Woodworking are safe, but take no responsibility for readers' actions. Take care when woodworking and always use guards, goggles, masks, hold-down devices and ear protection, and above all, plenty of common sense. Do remember to enjoy yourself, though*



To celebrate their 60th anniversary, Felder are running a fantastic competition in conjunction with *Good Woodworking* and *The Woodworker* magazines to find three of the best furniture makers across the UK – there's also some fantastic prizes up for grabs. See **page 28** for further details

# 38

At the bottom of the garden...

Edward Hopkins makes a chair fit for any green space



# Good Woodworking

September 309

• TOOLS • PROJECTS • TECHNIQUES • ADVICE

## PROJECTS



### 24 Purpose-made planter

Using some simple materials, Andy King employs the Kreg Foreman tested in this issue to knock up a quick and easy purpose-made planter, then paints it with General Finishes Pearl Effects paints

### 44 Eat your heart out!

Dustin Van den Abeele uses a clever, simple and cost-effective method to make this set of outdoor chairs and matching table, which will be adored by youngsters

### 48 DIY circular saw

Not content with other circular saws on the market, Andy Brough sets about making one to his own personal specifications, and the results speak for themselves – DIY is definitely best!

### 64 Hands-free!

David Bakker shares the secret of how you can make your very own wooden iPad dock/stand for just £5

### 71 Pop classic

Does Phil Davy's CD and DVD shelving reflect his taste in music? Timeless, with a bit of classical thrown in?

### 80 Burry nice vases

Deciding to utilise some of the offcuts in his timber pile, Les Thorne uses various pieces of burr oak to create two different vase shapes: one with and one without detailing

## TECHNIQUES

### 32 Stepping up from hand saws to powered saws – part 1

In the first of a new series, Peter Bishop looks at the variety of powered saws available and offers some great tips on getting the best from them



### 56 Which wood is right?

GW talks to Managing Director of furniture making company NEJ Stevenson Ltd, Neil Stevenson, who tells us about one of the exciting projects they recently worked on

### 66 Make a simple stool in an hour

In the first of a new series looking at basic projects that can be made using a CNC router, Dennis Keeling shows you how to make a simple step-stool



## PEOPLE & PLACES

### 46 Centrefold

Made using black walnut with brass inlay, Jory Brigham's stunning Mackenrow table tennis table harks back to a '70s aesthetic and is sure to stand out in any games room

### 60 Think outside the bird box!

Eric Simonds' bird boxes really do need to be seen to be believed – never has the phrase 'think outside the box' been more relevant!

## TESTS

### Andy King tests...

- 14 Axminster BS11-INV bandsaw
- 16 General Finishes Pearl Effects paints and Extender
- 18 Kreg Foreman
- 20 Cut & Peel tool foam

## YOUR FAVOURITES

- 8 News
- 12 Courses
- 13 Readers' ads
- 52 Letters & Makers
- 71 Around the House
- 89 Next month
- 90 Michael's musings



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CDP350V	550 / 16	16	£219.00	£262.80
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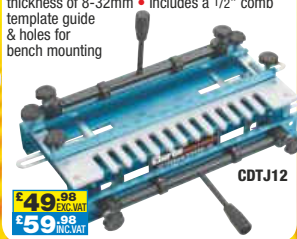
### Clarke ROUTER TABLE

CR1

Router not included

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### Clarke 12" DOVETAIL JIG

CDTJ12

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CBS300

### Clarke PROFESSIONAL BANDSAWS

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£538.80 INC.VAT

MODEL	THROAT DEPTH	MAX CUT 90°	MAX CUT 45°	EXC.VAT	INC.VAT
CBS300	305mm/12"	165mm	115mm	£349.98	£419.98
CBS350	340mm/14"	225mm	160mm	£449.00	£538.80

### Clarke BOSCH ROUTERS

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CR2 INCLUDES 15 PIECE KIT WORTH OVER £20



### Clarke ROUTERS

CR1C

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£47.98 INC.VAT

MODEL	MOTOR (W)	PLUNGE (mm)	EXC.VAT	INC.VAT
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Bosch	1400	0-55	£79.98	£95.98
POF1400ACE				
CR2	2100	0-60	£109.98	£131.98

### Clarke ROUTERS

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CBG6RZ	PRO	150mm	£39.98	£47.98
CBG6RSC	HD	150mm	£49.98	£59.98
CBG6SB#	PRO	150mm	£49.98	£59.98
CBG6RWC	HD	150mm	£54.99	£65.99
CBG6W (wet) #HD		150/200mm	£49.98	£59.98

### Clarke BENCH GRINDERS & STANDS

CBG6RP

£67.19 INC.VAT

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PORTSMOUTH 277-283 Copnor Rd, Copnor	023 9265 4777
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# Top honours from furniture school

## Student of the Year

A student from Russia has won top honours at the Chippendale International School of Furniture, for the first time in the school's 31-year history.

Iana Molotok, from St Petersburg, won Student of the Year at the prestigious school, against competition from other students from the UK, Canada, the USA, Ireland, France, Germany, Australia and New Zealand.

Among her portfolio was a wych elm chair with echoes of a Möbius strip in its beautifully-shaped design, and a coffee table in yew and sycamore, with an intermittent stream of resin across the top, creating the effect of a meandering river.

A former financial controller, Iana is returning to St Petersburg to set up Credenza Studio, her own furniture making business.

## Best Portfolio

Best Portfolio went to Mike Whittall, from Aberdeenshire, for a portfolio that included a curvy dressing table and stool made from sycamore and yew; an exceptionally well-proportioned coffee table with a shaped ash top and elm legs; and an elm desk with generous flowing curves and a design borrowed from the Ottoman Empire.

Mike, a former finance and tax advisor, is setting up Ochre & Wood, his own furniture making and restoration business, from his hometown in Aberdeenshire. He will be working mainly to commission sourcing wood, as far as possible, from local sawmills.

## Design Student of the Year

Design Student of the Year was awarded to Anne-Lise Maire from Strasbourg in France for a portfolio that included a beautifully-crafted yew and elm writer's desk. Her second project was a wonderfully-eccentric long-legged music box with elm cabriole legs.

Anne-Lise, who now lives in Edinburgh, has set up 'Gild Ma Frog Furniture' to produce bespoke pieces and create her own range of modern and sophisticated gilded cabinets.

## Students' Choice

Adam Stone from Perth in Scotland won Students' Choice for a highly-inventive oak coffee table that opens from 1,200-2,000mm long to become a dining table large enough to accommodate 10 people.

The chairs, which he has also designed, can be stored inside the table – making it a practical and attractive solution for any home where space is at a premium. The internal mechanism was also made from oak, although the ingenious table can be made to order in a variety of materials. Adam is currently setting up Adam Stone Furniture in Perth.

## The Professor Richard Demarco Prize 2016

Lastly, Graham Clark from Fife was awarded the Professor Richard Demarco Prize 2016, an award that recognises particular craftsmanship and artistic merit. In 2011, Graham was knocked off his motorbike by a hit-and-run driver, sustaining both head and other severe physical injuries, and had to relearn how to read and write.

The main piece of furniture he made during the year was a folding double cabinet made from spalted beech, oak and yew – and which is to be given to his youngest daughter, Madison, aged six.

Each year the School takes students from around the world for immersive 30-week courses and also runs one-week 'taster' courses throughout the year. Principal Anselm Fraser, said: "This year's graduates have all shown exceptional skill and craftsmanship, and it was very difficult to choose winners. Our course is designed to give students the very best training in furniture design, making and restoration and, with their proven talent, give them the building blocks for future success." To find out more, see [www.chippendaleschool.com](http://www.chippendaleschool.com).



Iana Molotok, from St Petersburg, won Student of the Year



Mike Whittall, from Aberdeenshire, was awarded Best Portfolio



Anne-Lise Maire, from Strasbourg in France, won Design Student of the Year



Adam Stone from Perth, in Scotland, won Students' Choice for a highly-inventive oak coffee table

Graham Clark from Fife was awarded the Professor Richard Demarco Prize 2016, an award that recognises particular craftsmanship and artistic merit



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# New small plough plane from Veritas



This version of the Veritas small plough plane excels at cutting grooves, rebates and tongues. Plus, it has the ability to cut decorative beading.

The plane features a 168mm long fence that registers solidly to the workpiece. Double guide rods and a special collet locking system prevent the fence from racking. The fence is through-drilled, allowing you to add a wooden fence extension and the large wooden rear tote offers a solid, comfortable grip. The 225mm long ductile cast-iron body weighs 795g and has a machined 45° blade bed. Large brass knobs make adjustments fast and easy without the need for tools. The fence offset with a 6.35mm blade is from flush up to a maximum of 38mm.

An improved feature of this plane is the adjustable depth stop, which has relieved edges to avoid marking your work. Secured directly by

a brass knob, it controls the depth of the groove or rebate to a maximum of 12.7mm deep. The plane is supplied with a 6.35mm-wide lapped A2 tool steel blade and is currently priced at £134.96 inc VAT – see [www.brimarc.com](http://www.brimarc.com) for more details.

## Veritas depth stop upgrade

Veritas has also upgraded the clamp mechanism for the depth stop on Veritas small plough planes manufactured before March 2016. This change provides greater clamping force to the depth stop shaft. It reduces the chance of accidentally pushing the depth stop to a new position while the plane is in use. This new clamp mechanism is compatible with all existing small plough planes. Planes purchased after 1 March 2016 include this upgrade.

## Triton TBJ001 biscuit joiner

Triton's new TBJ001 is a powerful 760W biscuit joiner with cast-aluminium base, fence and drive housing and is the ideal portable tool for producing fast, strong joints for furniture and shelving construction. With all-metal gearing for long life the TBJ001 has an accurate adjustable and removable fence with height range between 0-40mm and angle adjustment of 0-90°.

A simple six-position turret stop simplifies the depth setting for easy biscuit size selection (compatible with No.0, No.10, No.20 and S6 sized biscuits). A hinged base makes for easy blade change and cleaning while an integral dust port and insulated handles means it's both safe and comfortable to use to make repeated cuts. The kit includes a fitted blade, blade pin spanner, hex key, spare carbon brushes and a dust bag. Priced at £119.56, see [www.tritontools.com](http://www.tritontools.com).



# Makita extends job site speaker range

With the release of two new models, Makita's job site radios can now be powered by the full range of Lithium-ion batteries found in the Makita power tool range, including the latest 10.8V CXT slide battery. The Makita DMR107 job site radio has full AM and FM frequency ranges, twin 76mm diameter speakers with a maximum output when using an 18V battery of 3.5W from both speakers. This rugged IP64 protection-rated dust and shower proof radio has elastomer bump protector casing, digital display, auxiliary device connection and AC adaptor.

The new 'Bluetooth' Makita DMR108 job site radio is now equipped with Bluetooth Class 2 to wirelessly play music from a mobile device such as phone, MP3 player or tablet with a range of up to 10 metres.

The ultimate site sound system may now be

the Makita DMR200 job site Bluetooth speaker.

This is a compact and lightweight speaker powered by either the Makita LXT or CXT Li-ion battery range or from an AC supply, which delivers a massive 7.0 10.0W output from the two-way speaker system, and features a 100mm diameter woofer and 36mm tweeter with a Bluetooth range of up to 10 metres. Features include AUX-IN jack; USB port for charging mobile devices; LED indicators to show power supply, maximum volume, and Bluetooth pairing/connectivity; IP64 protection rating and flat-top, anti-slip surface for the portable device.

See [www.makita.com](http://www.makita.com) for more info.



# Stiles and Bates celebrate their 21st anniversary

6 September will see Stiles and Bates of Dover, Kent celebrating the 21st anniversary of opening their woodworking supplies shop.

To celebrate their 21 years of buying, milling and selling UK timbers, under the stewardship of Woodland Heritage, they are donating £100 for each year they have traded to be spent on planting a selection of native timber species with the stipulation that the trees will be planted for harvesting and subsequent re-planting – the bottom line of all good forestry management.

To find out more, see [www.woodlandheritage.org.uk](http://www.woodlandheritage.org.uk) and [www.stilesandbates.co.uk](http://www.stilesandbates.co.uk).

## YANDLES' SUMMER WOODWORKING SHOW



Yandles will be holding their biannual woodworking show from 9–10 September at their premises in Martock, Somerset. Be sure to put the date in your diary so that you don't miss out on one of the South West's most exciting and oldest woodworking events. Yandles pride themselves on hosting a show that appeals to the professional turner, the hobbyist and to those who wish to see what beauty can be created out of wood by their range of talented demonstrators, including Mark Hancock, Jason Smith, Mary Ashton, Les Thorne and Andy Rounthwaite to name a few, and on the carving side you can expect to see expert Zoe Gertner.

The event will also include a range of masterclasses, giving

visitors the chance to sit in on demonstrations and talks from some top manufacturers, including Record Power, Charnwood and Triton.

You can enjoy free entry and parking, as well as trade stands from around 50 manufacturers, including Record Power, Chestnut Products and Robert Sorby, all with show promotions and special offers.

Yandles' timber selection is immense and they will also be offering discounts over the two days. And don't forget to visit the craft tent, where taster sessions will be held in a number of different crafts alongside demonstrations ranging from paper crafting to crochet. For full details, see [www.yandles.co.uk](http://www.yandles.co.uk).

## Charnwood's woodworking & woodturning show

Charnwood will be holding their woodworking and woodturning show on Saturday 20 August at their premises in Leicestershire. You can enjoy free entry, free parking, a free barbecue as well as show discounts on all Charnwood machinery, woodturning blanks, Robert Sorby chisels and Chestnut finishing products.

Les Thorne will be demonstrating woodturning; Ryan Davenport will be turning some pens; members of Coombe Abbey Woodturners will be present as well as a range of tools and sharpening demonstrations from Robert Sorby.

For more details and directions, see [www.charnwood.net](http://www.charnwood.net).

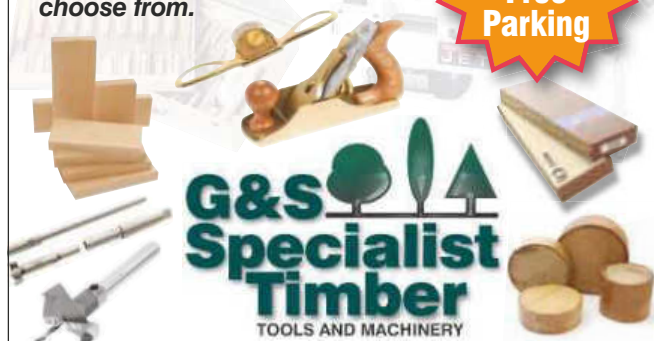
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## COURSE DIARY

It's summer, and there's a course to suit everyone!

### September

- 5 & 20 \* Pen making
- 13-14 \* & 26-27 Routing
- 14 Pyrography – Ben Beddows
- 16 Sharpening with Tormek hand tools
- 20-21 Machining castings
- 20-21 & 22-23 \* Woodturning
- 27-28 Bowls & platters
- 30 Fine-tuning hand planes
- 30 Fine-tuning hand tools \*

\* Course held in Sittingbourne, Kent  
Axminster Tools & Machinery  
Unit 10 Weycroft Avenue  
Axminster, Devon EX13 5PH  
Tel: 08009 751 905  
Web: [www.axminster.co.uk](http://www.axminster.co.uk)

- 16-18 Woodcarving for beginners
- 18-22 Picture framing
- 20 Woodturning taster day
- 20-23 Turning bowls from wet & seasoned wood
- 23-25 Sculptural woodcarving

West Dean College  
West Dean, near Chichester  
West Sussex PO18 0QZ  
Tel: 01243 811 301  
Web: [www.westdean.org.uk](http://www.westdean.org.uk)

- 2-5 & 30-3 Beginners' four-day course
- 10 Chair making – part V
- 17 Dovetailing weekend

Chris Tribe, The Cornmill, Railway Road  
Ilkley, West Yorkshire LS29 8HT  
Tel: 01943 602 836  
Web: [www.christrifurniturecourses.com](http://www.christrifurniturecourses.com)

- 2 An introduction to marbling & woodgraining
- 19-23 Oak timber framing: jowl posts
- 22 Timber: identification of species

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- 3 Introduction to woodturning
- 5 Full-time furniture making course (24 or 48 weeks)
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## Bentley Woodfair 2016



This year sees the 21st anniversary show of the fantastic Bentley Woodfair, and with over 150 demonstrators and exhibitors, this is an event not to be missed. There will be a packed programme of have-a-go activities, live demonstrations of woodworking skills, craft displays, children's activities, and chainsaw sculpting, as well as a wide range of trade stalls selling everything from tools and equipment to bespoke furniture.

The woodland zone offers the chance to experience 'forestry in action', including timber processing and horse logging, while the main arena will entertain with falconry, an exciting lumberjack display team, didgeridoo playing and much, much more.

Visitors will be given the opportunity to have a go on the exciting 'Branching out Adventures' equipment (additional fees apply), which includes high ropes, zip wires, giant swing and a climbing wall.

Taking place from 23-25 September, Bentley Woodfair is a great day out for all the family and perfect for those who love wood and woodlands. Held in the beautiful Bentley Estate, visitors to the Woodfair will enjoy access to the Motor Museum, Wildfowl Reserve and Miniature Railway as well as all the fabulous Woodfair attractions. See [www.bentley.org.uk](http://www.bentley.org.uk) for further info.

## Stock Gaylard's 2016 Oak Fair

After a successful two-day show last year, the Stock Gaylard Oak Fair will be returning from 27-28 August. This wonderful show makes a superb end of holidays day out for all the family.

The children are entertained throughout the day with a variety of activities and workshops, while adults of all ages can enjoy the 200+ stalls and exhibitors showing the depth of rural skills to be found locally.

You can expect to see 'Avalon Axes', who will be letting children and adults have a go at

showcasing their axe throwing skills and The Great Big Tree Climbing Company will be offering tree climbing for kids and adults, plus a zip wire for smaller visitors.

In the arenas this year will be the Heavy Horse display team, Mere Down Falconry and Adam's Axemen, who will all be putting on fantastic displays and getting the crowds involved. Plus, returning after taking a year off is the team from Pratensis Countryside Services, who will be demonstrating the mowing of grass with a scythe, which visitors can also try. Advance tickets can be purchased with 10% discount; see [www.stockgaylard.com](http://www.stockgaylard.com).

## DeWalt launches XR FLEXVOLT

Launching this month, the revolutionary DeWalt XR FLEXVOLT is a convertible 18/54V battery: completely backwards compatible with existing 18V DeWalt products, yet with the option to amplify its voltage to an unprecedented 54V to be used on bigger construction power tools. Traditionally, when compared with corded power tools, even the most efficient cordless system provides a compromise between increased portability and reduced power, between greater ease of use and reduced runtime. DeWalt has recognised the daily frustrations these limitations cause end-users, and engineered the DeWalt XR FLEXVOLT system to eliminate any and all restrictions, to provide a cordless system that offers zero compromises.



### A new chapter in cordless technology

The power of the FLEXVOLT battery opens up new avenues in cordless, heavy-duty construction power tools, and DeWalt is delivering the new product range to accompany this innovation. The new range is comprised of eight products: a 54V grinder, 54V SDS plus hammer, 54V circular saw, 54V alligator saw, 54V reciprocating saw, 54V plunge saw, 54V table saw and a 54V 216mm mitre saw. These are cordless, heavy-duty construction power tools with all the accuracy, capacity and power of corded. To take the XR FLEXVOLT table saw as just one example, this is a power tool capable of cutting 50m of 19mm OSB from just one charge of a single battery – yet portable enough to be easily moved from room to room, and without the need to search for a power source.

The DeWalt XR FLEXVOLT range is the next chapter in cordless technology. This new range of tools are not just extremely powerful, they will also provide in excess of a full day's runtime on single charge for most users. The potential for this technology is limitless, for each and every trade. To find out more, see [www.dewalt.co.uk/xrflexvolt](http://www.dewalt.co.uk/xrflexvolt).

## OFFCUTS

Come and celebrate Sheffield Tool manufacturing at the Kelham Island Museum! This event coincides with a Heritage Weekend and also behind-the-scenes tours of the Hawley Tool Collection. What better way to see and purchase Sheffield-made tools than in the heart of Sheffield's industrial museum. Come and see how this city has thrived on industry past and present. Taking place on Sunday 11 September, see [www.simt.co.uk/kelham-island-museum/whats-on/heritage-open-days-2016](http://www.simt.co.uk/kelham-island-museum/whats-on/heritage-open-days-2016)

Chichester College staff are celebrating after hearing that a lecturer and former student have both been named in the Queen's Birthday Honours. Christian Notley, furniture making lecturer at the college, has been awarded an MBE for his services to WorldSkills at Leipzig 2013 and São Paulo 2015. Former student Edward 'Woody' Harringman has also been recognised, receiving the British Empire Medal (BEM) after winning the gold medal for cabinetmaking at last year's WorldSkills competition in São Paulo. Congratulations to both! See [www.chichester.ac.uk](http://www.chichester.ac.uk) for more info

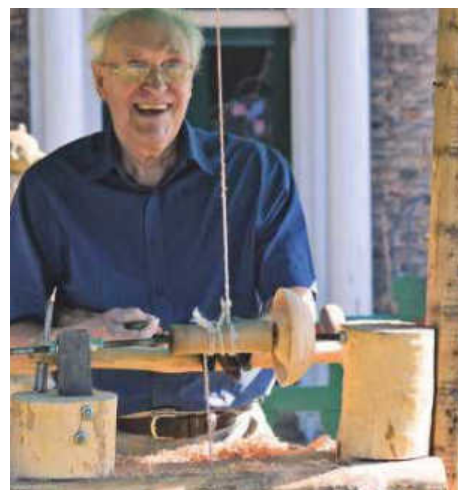
D&M Tools will be returning with their infamous tool show from 7–9 October. We will bring you more details in the next issue, but for now, all you need to know is that this event features free entry, free show guide, free parking, free masterclasses plus the biggest brands, new products and huge savings. Where else could you get all this? See [www.thetoolshow.com](http://www.thetoolshow.com) to find out more

## 17th annual Fangfest

This year sees the 17th annual Festival of Practical Arts being held in the village of Fangfoss, which takes place from 3–4 September.

This delightful east Yorkshire village puts on a fantastic show once a year. Jane Cook from The Rocking Horse Shop, says: "The whole aim of Fangfest is to promote traditional crafts. It's amazing how many local traditional craftspeople we have and it is a real joy to see the makers demonstrating their craft."

The Rocking Horse Shop opens its doors and lets visitors see how rocking horses are made, including carving, painting and making tack. At Fangfoss Pottery you will be shown how to make a teapot and you can even have a go at making a pot yourself. There will be traditional pole-lathe demonstrators, woodturning, corn dolly making, basket weaving, stained glass window making, and much more. Over 20 local stall holders, many of them demonstrating their individual crafts, will take part in Fangfest in various locations around the village.



"We also incorporate a range of family activities, including a vintage car rally, flower festival, fairground rides, and you can even have a go at clay archery. We have something for every one, from the very young to the very old," says Jane. To find out more about this great weekend of entertainment, see [www.fangfest.org.uk](http://www.fangfest.org.uk).

## Airmaster Tiger air compressor range

This range of great value air compressors from Machine Mart are ideal for DIY and semi-professional garage or home workshop use for any job involving spraying, nailing stapling, inflating and more.

All models in this range feature fully automatic stop/start controls, twin outlets with outlet pressure regulator/gauges and efficient intake air filters, protecting the compressor and maximising output purity. Larger models also include an efficient 'V' twin pump for high output.



These compressors feature an impressive air displacement of up to 14.5cfm, a maximum working pressure of 8Bar and tank sizes of up to 100 litres. Prices start from £95.98; see [www.machinemart.co.uk](http://www.machinemart.co.uk).

## FREE READER ADS

### MACHINERY

**Hegner VB36 Master Bowl Turner** lathe with tailstock, chucks and Robert Sorby tools; £4,000. Also, DeWalt 62 circular saw; DeWalt 625 router; DeWalt radial arm saw; performance surface planer; Scheppach table saw and many more items. Call to make offers **01792 426 822 (Swansea)**

**Felder combination machine** – 1.3m sliding table spindle moulder with router attachments; F34 power feeder and AF12 dust extractor; £1,500 **01435 872 222 (Heathfield)**

**Nu Tool woodturning lathe**, 1,400mm long; 300 × 850mm

capacity; cast-iron; steel stand; swivelling headstock; variable-speed; 230V motor; toolrests; centres; chucks; faceplates; spanners; 10 HSS turning tools – excellent condition; £295 ONO **01733 571 763 (Peterborough)**

### MISCELLANEOUS

**Wickes 1,200W router**: cutter capacity 40mm; £60. 1/2in 12-piece router bit set; £30. Buyer collects **01912 858 020 (Newcastle)**

**Stanley 06 plane**; £45; Record 071 router plane; £30; Stanley 4 1/2in smoothing plane; £37. Call for more details **0208 641 4238 (Surrey)**

**Record 405 Multiplane** with 23 cutters; £50; Record 050 combination plane with 17 cutters; £20. All in original boxes; buyer collects **01525 404 991 (Bedfordshire)**

**Bosch 900W circular saw** with variable depth of cut; £55 **01435 872 222 (East Sussex)**

**Martin Godfrey's famous Woodrat WR5** plus handbook and DeWalt router DW625EK; £500. Call for details **01242 222 482 (Cheltenham)**

**SIP-01938 woodturning lathe** – cast iron; 3/4hp motor; variable 10 speed easy change; digital read

out; swivel headstock; steel stand, and other extras. 36 × 12in capacity, excellent condition; £240 **01206 511 071 (Colchester)**

**A complete range of** woodworking tools and equipment used for violin, guitar and cabinetmaking, all of which are in excellent or like new condition **01672 520 020 (Marlborough)**

**Good Woodworking magazines**, issues 100–169 (Autumn 2000 to December 2005). Free to anyone who can collect (Crieff, Perthshire) or pay the necessary shipping costs **01764 652 016 (Perthshire)**

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# Bench-top beauty

This trade-rated bench-top bandsaw from Axminster is made to very high standards and is definitely a contender for the bigger, more expensive machines out there

same quality of the big boys; just as I would have hoped, and depending on what you work with as far as materials are concerned, there's the option to have an equally well made two-speed machine or this model with an inverter drive to control the motor. This allows the speeds to be controlled within the ratios of the two belt positions with a dial mounted on the neck of the machine. This speed control allows a wider material base to be used, including mild steel up to 10mm-thick.

There's no indicator on the dial to give an idea of the speed, however, so it's a case of using an adjustment on the fly type control to find the sweetest spot on some materials.

Metals respond better on the lower belt speed and lowest blade speed to gain maximum torque under load and to minimise heat build up. Lower speeds tend to work best with plastics as well to prevent any melting issues from heat.

## On test

Putting the steel function to the test, I tried the saw with a suitable blade on an 8mm-thick piece of flat bar. If you haven't cut thick steel on a bandsaw before, then don't expect it to be as nippy as a cut in timber; it is far slower but the saw is very capable, not struggling as the work is fed and leaving a decent finish.

So before looking at the timber performance it's well worth analysing the adjustments and settings. The upper guides are fitted to an externally mounted heavy steel rack and pinion



The depth of cut is altered with this heavy-duty rack and pinion setup

**I**t's always perplexed me that smaller machinery seems to be built and aimed at a budget audience when there are plenty of people out there who do fine, high quality work at smaller levels.

Instrument makers, box makers and beyond are prime examples of such needs and I've mentioned it often, so having been invited to check out this new machine from Axminster that is aimed at just that market, I was more than happy to go and have a look.

## The nitty gritty

So let's talk costs first. At a price that would buy a very nice bigger machine, this one is built to the



The upper guides are adjusted without the need for tools



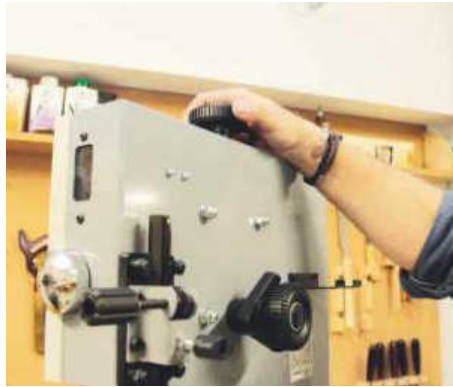
Height adjusting screws allow the insert to sit perfectly flush



The fence locks with a cam lever and has a fine adjuster built in



You swap the belt to alter to either of the two speed ratios



Blade tension and tracking are set using the top and rear knobs



Rack and pinion gearing make tilting the table easy



Metal cutting up to 10mm-thick is a breeze with this saw

adjuster, with equally stout guide adjusters. These are again all steel and of a good standard, including the locking wingnuts; an area where penny pinching is often employed.

Roller bearings support the sides of the blade with a further roller bearing acting as the thrust support.

All the setup tweaks needed are made with fine threaded adjusters for quick and easy accurate positioning when swapping between blade sizes. The downside is the lower bearing setup; these are again all roller bearings, but you have to get the hex wrenches out to position them, although access is decent enough for this.

The cast-iron table adjusts on a rack and pinion trunnion for setting any bevels and has a pin locking index for the 90° and 45° positions. There's no reason why you can't drill out a couple more locations on the trunnion if you work a specific angle regularly, which is a bonus, but the Bristol lever secures firmly for general setting.

There's a side loading slot for changing the blades in the table so the front fence support stays in place. A thick metal insert closes the blade aperture and sits on adjustable jacking screws to set it perfectly flush, which is a nice touch as a slightly high or low insert can be frustrating when the work snags or catches.

Blade tensioning and tracking is standard with a top-mounted tensioning knob and rear-mounted tracking knob, while a viewing window in the side of the cabinet is useful for checking the blade position on the wheel.

There's no blade tension indicator, however, so you have to adjust and tweak accordingly; not



The saw is equally powerful for deep ripping of timber

really a huge problem as the tension indicators tend to be ball-park positions that need fine-tuning as well.

The fence is secured with a cam lever and holds securely without flex; there's also a fine adjuster built in for fine-tuning a cut, which proves useful if you are cutting tenons or veneers and need to achieve a very accurate setting.

### Machining timbers

Putting the saw to work on timber, I found that it matches its ability to cut steel in the power department but at a higher feed rate. The high build quality makes it a smooth ride and therefore you can work to good accuracy, which I put to the test by making some veneer cuts.

I was able to book-match veneers directly from the saw with no steps in the fit when I butted them up, which will be a major asset to the box and instrument makers where veneers and small components need to be cut accurately and consistently.

Capacities are decent as well with 160mm being the maximum depth of cut, so it's at home on bigger pieces such as tenons or deeper veneers as required.



Thin repeat veneer cuts are accurate and consistent

### Conclusion

It's refreshing to see that Axminster have invested in a bandsaw that matches the big boys in terms of build quality to fit in with the end of the market that works to a smaller capacity but still demands accuracy and consistency, and this saw is definitely one to take a closer look at if you fall into this particular category.

If you don't require the steel cutting side of things, then you can save yourself a few bob and opt for the standard BS11 version, which doesn't have the inverter motor. **GW**

#### Specification:

- ▶ **Motor:** 750W
- ▶ **Blade speeds:** 42-660 & 64-1,001 metres per minute
- ▶ **Blade width:** 3-12mm
- ▶ **Max depth of cut:** 160mm
- ▶ **Max width of cut with fence:** 220mm
- ▶ **Throat capacity:** 250mm

- ▶ **Typical price:** £1,199.95
- ▶ **Web:** [www.axminster.co.uk](http://www.axminster.co.uk)

### THE GW VERDICT

- ▶ **PROS:**  
High quality construction; very stable; can cut metal and other materials
- ▶ **CONS:**  
Lower guides aren't tool-free adjustments; no speed setting indication on speed dial
- ▶ **RATING:** 4.5 out of 5

# Metallic effects made easy



Add a metallic touch to your furniture projects with this great range of Pearl Effects from General Finishes

The Pearl Effects range from General Finishes gives you the option to impart a burnished look on any finish – a worn gilded effect on a moulded piece such as a mirror or picture frame, for example.

You can experiment to achieve different effects and the General Finishes website has a video that shows plenty of different techniques – give it a watch to pick up some tips before you start.

## Garden planter

I decided to apply the Pearl Effects to the garden planter I made (see page 56). First, I applied a base coat of milk paint, choosing to use Patina Green, but the Pearl Effects can be used over any of the General Finishes milk paints, stains and water-based topcoats in the range.

One coat of the Patina Green was enough to gain a solid base colour. I gave it a quick de-nib once dry and a coat of Exterior Top Coat to seal it, followed by a de-nib, then I was ready to go.

The instructions advise not to go back over previously applied Pearl Effects as you work, but the Argentine Pearl is a bold silver and I found that it does block out the base colour if brushed on too thickly, even though it is meant to be a translucent finish, so I went for a dry brush effect.

The Enduro Extender stops the Pearl Effects from drying too quickly so that you can work it in easier, but you still need a bit of practice to achieve the look you want. It's not a cheap finish but a little goes a very long way. I used a small amount of the Pearl with a squirt of Extender, which was enough to coat the entire planter.

Dab the brush on a rag first to soak off any excess, then dab, drag and brush the finish over the work. The silvering begins to build up while still allowing the blue to break through.

If you over-apply, you can wipe it off with a cloth, but if you are applying it outside in warm weather, it does begin to dry quite rapidly, even with the Extender, so you need to decide if you are happy with what you have quite quickly.

I'm quite pleased with the result although the finished photo doesn't do it justice as the camera picks up the silver and misses a lot of the underlying blue, but it is fairly uniform and the effect I achieved is quite effective in sunlight. A bit more practice on some better timber should yield more consistent and controllable results.

## Conclusion

Although the directions state that the range is only suitable for indoor use, I gave it a couple of coats of external finish to seal it in so it should hopefully stand up to our British climate, but for indoor use on mouldings and furniture you can achieve some nice effects, especially if you mix the Pearls available and alter the base coats. **GW**



A suitable base coat is applied first – I used a milk paint from General Finishes



The base coat is de-nibbed with a fine abrasive and dusted off



An external top coat is applied to seal the surface, ready for the Pearl Effects



A sparse amount is needed; a small squirt of Extender allows for a longer working time



Wipe any excess off onto a rag to allow a fine, dry build-up of the Pearl Effects



As you brush it in the silvering becomes apparent while the blue still shows through



Although the photo looks blotchy, the finish is uniform and quite pleasing

## Specification:

- ▶ **Pearl Effects colours:** Argentine, Bronze, Burnished, Champagne, Copper & Tawny
- ▶ **Quantity sizes:** 473 & 946ml
- ▶ **Typical prices:** Pearl Effects – £43.20 (473ml); Enduro Extender – £13.15 (473ml)
- ▶ **Web:** [www.generalfinishes.co.uk](http://www.generalfinishes.co.uk)

## THE GW VERDICT

- ▶ **PROS:**  
Nice metallic effects; easy to apply
- ▶ **CONS:**  
Requires practice to get the best effects; quite expensive
- ▶ **RATING:** 3.5 out of 5



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# Perfect pockets



Fans of pocket-hole joinery will certainly benefit from Kreg's new offering, which allows you to make perfect pockets at twice the speed and in half the time

The potential to use the same technique to secure components in traditional joinery styles led to the introduction of the Kreg jig and it works incredibly well in many areas, face frame work especially so.

The traditional jigs are quick enough, but there's still a lot of time-consuming and repetitive work, such as setting the clamp, drilling with a suitable power tool, unclamping and repeating countless times...

## Combined functions

So the Kreg Foreman reduces some of these repetitive functions, combining everything in one neat unit; an underslung motor with drill secured, along with a fast paddle clamp. Within the clamp handle is the power and safety lock switch: depressing the switch allows the lever to descend as well as the trigger to be pulled. The beauty here is that as the paddle clamps down and applies pressure to hold the work and the drill starts, by continuing the plunge of the paddle it swings the motor, moving the drill up through the aluminium table to form the complete pocket, all in one movement.

Setting the Foreman up requires setting the fence at the correct backset to suit the timber thickness being used, moving it backwards or forwards and securing the position with twin locking levers.

There are settings on the table to indicate common thicknesses; it's also easy enough to set the fence up using these as positional indicators for any other sizes if needed.

Once the backset is secured, the screw length is determined using the supplied setup block; this is set by winding the adjusting knob at the rear of

**P**roper' woodworking, with all the marking out and accurate cutting it entails, is both time-consuming and requires a certain amount of skill and patience to yield consistent results, so anything that helps make life easier while achieving the results you need is no bad thing.

Pocket-hole joinery is certainly an area that does that, although back in my day, pocket-holes were associated with joinery to get fixings in areas where it was tricky to position a joint to do the job or attach clamps on, as well as part of a knock down option on bigger furniture, such as securing plinths on wardrobes, for example.



You have to connect the supplied link hose if you want to use an extractor



The drills are held in a sleeve chuck for quick changeover



Removing this pin allows the motor to drop out to remove the table



With the table removed the sleeve can be swapped for different drill sizes



Common timber dimensions are marked to help set the fence

the clamping arm assembly until it hits the correct position on the block.

With the basics done you're almost ready to go; it's just a matter of positioning the pockets on the project in hand. The fence is marked up with increments radiating from the centre so you can align the work easily to the left or right to the appropriate measurement.

It's graduated in imperial and metric and either are just as useful as you are simply referencing from a mark and replicating on the opposing side if you are looking to set pockets in pairs, set spacings, or simply looking for a single central pocket.

Within the fence are two sliding stops for fast repeat work; ideal for stock of consistent widths. These require a hex wrench to alter their position, but are very quick to achieve.

Additionally, the stops are sprung so that if you don't need them, simply pressing the work against them depresses them back flush to allow the work to address the fence in any position, so you can work between a set width and other components without resetting anything. You can also slide them back to lock in flush if you don't need them for a particular project.

### Flat working

The cast aluminium table hinges up to allow you to gain access to the motor for bit changing and the storage area for spare drills and other accessories, and a quick-release sleeve chuck secures the drill so any swaps of dull cutters is very quick, but to change to the Micro-Pocket or HD options the guide sleeve needs to be replaced as well, which requires the table

to be removed. This is simple to do, simply disconnecting the internal extractor hose to allow the pivots to disengage to permit the table to be flipped over and the sleeve swapped using the supplied hex wrench.

The extractor hose link pulls the waste directly from the cutter area to the rear outlet and works very efficiently; ideally the best setup is when linked to an extractor with a take off power port to engage the extraction as the Foreman is powered up. If you don't have extraction available, the hose can be uncoupled and the waste allowed to simply drop below and collect beneath in the base cavity.

Aside from the immediate increase in speed the motorised all-in-one clamp and drill function offers, the biggest benefit is that the work sits flat to the table for all joints.

The normal pocket-hole jig's method of use has the work addressing the jig in a vertical plane and longer components soon become unwieldy. Here, the large table surface supports components well and any longer or wider pieces can easily be supported so any pockets can be made in a safe and efficient manner, although if working with really wide boards, it could become a challenge to reach over and engage the paddle and power switches.

### Conclusion

It's always worthwhile getting in the routine of doing a cutting list and sketching or setting out your projects prior to jointing, as you can swiftly make marks to indicate which parts have the pockets. I loved just how quick and easy it was to get up and running once I had cut the

components to size, and it's here where the Foreman cleans up over other standard pocket-hole jigs available.

Pocket-hole joinery might not be for everyone, and purists may well scoff, but in many areas where it's the look that is the desired effect, the Foreman excels at quickly preparing the parts ready for assembly, and in production work where carcassing and face frame work makes up a big proportion of what you do, this motorised option is a no-brainer. **GW**

### Specification:

- ▶ **Stock capacity:** 13-38mm thick
- ▶ **Drill supplied:** Standard 9mm
- ▶ **Drill options:** Micro-Pocket and HD drills
- ▶ **Table dimensions:** 355 x 597mm
- ▶ **Supplied with:** adjustable fence with spring-loaded stops; dust-collection attachment; stepped drill bit and drill guide; drill bit setting block; owner's manual

- ▶ **Typical price:** £449.58
- ▶ **Web:** [www.kregtool.eu](http://www.kregtool.eu)

### THE GW VERDICT

- ▶ **PROS:**  
Pockets can be made very quickly; easy to adjust; multiple drill options
- ▶ **CONS:**  
Hex key needed to adjust the stops

**RATING:** 4.5 out of 5



You set the drill depth against this setting block...



... which is altered by screwing this knob up or down



The Foreman is very easy to use: simply pull the trigger and plunge the handle



The resulting pockets are clean and uniform



Once cut, the joints are screwed together in the normal manner



It makes any number of joints very quickly and strongly

# Custom storage for your tools

Want to protect your tools from scrapes and keep them organised? This easy to cut tool foam allows you to create your own custom storage to ensure your tools stay right where they should



**W**ith many power tools now supplied in stackable interlocking boxes with internal housings to keep things secure, it leaves the hand tools as poor relations. But with some of the more expensive hand tools cherished equally, it's now the case that you can line out any tool box, chest or drawer with this excellent tool foam and cut out shapes to suit all of your prized possessions to keep them secure.

## Easy cutting

The foam is constructed from thin welded layers of around 5mm each, allowing you to cut to the desired depth and peel out the layers according to the depth you want to sit them in. The foam is also dense enough to cut easily without deforming and also offers excellent support to protect and secure the tools.

It can be cut with any craft knife, but ideally a long-bladed one works best as you can get a straighter, deeper cut if needed. You can buy the foam as a starter kit complete with a knife and a long-nosed marker pen to trace around the tools, or the pen and knife as a separate kit.

Marking and cutting is a cinch: it cuts really easily with a sharp blade and if you cut to the inside of the line, you achieve a snug fit.

The knife is also great for using as a depth stop: by sliding the blade out to the depth you require, it clicks into position and ensures that you only cut as deep as needed.

Once you've cut the outline, it's simply a matter of peeling out the layers to the cut depth.



The resulting recess should now be deep enough to take the tool



Position the tools on to the foam to find the best position



Slide the knife blade out to the depth you want the tool to sit in

The base of the cut-out can look a little ragged as you have to split through a weld, but if you want to achieve a clean look, then it's easy to cut the top layer from the waste piece and put it into the base for a clean finish.

## Conclusion

If you want to keep your tools secure, then this foam, especially in the smaller sizes, is a bargain, and it also allows you to easily spot if something is missing if you fit the foam into tool boxes to use out on site or around the home workshop.

You can get also get a fair amount of tools onto one piece of foam if you lay it out well; the chisel set I used for the review took up less than 300mm square.

The foam is available in A1, A2, A3 and A4 sizes (the same as paper) and in two thicknesses: a five layer 30mm version and a 10 layer 55mm-thick version. **GW**



You can cut a thin sliver off the face side of the waste, which can then be used to line the bottom of the recess for a clean look. The resulting recesses keep all of your tools held securely in place



Draw around each tool using the long-nosed marker pen



Cut around the mark, ensuring to keep to the inside of the line



Slide your finger in and peel out the cut layer

## Specification:

- ▶ **Foam sizes:** A1, A2, A3 & A4
- ▶ **Foam thicknesses:** 30mm & 55mm
- ▶ **Typical prices:** Starter kit – £8.70 (including knife, pen and two small pieces of foam); A2 (420 × 600mm – as reviewed) 30mm foam – £8.14; A3 (420 × 600mm – as reviewed) 55mm foam – £15.61; pen and knife kit – £8.10
- ▶ **Web:** [www.toolovation.co.uk](http://www.toolovation.co.uk)

## THE GW VERDICT

- ▶ **PROS:**  
Great for keeping tools secure; easy to cut
- ▶ **CONS:**  
None that spring to mind!
- ▶ **RATING:** 5 out of 5



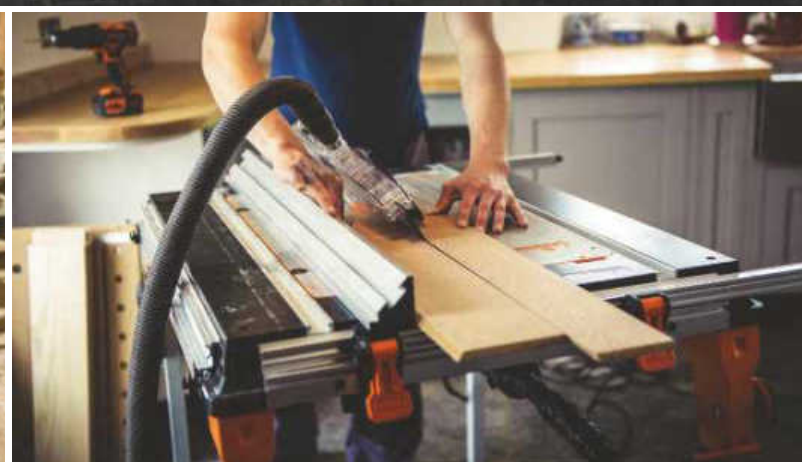
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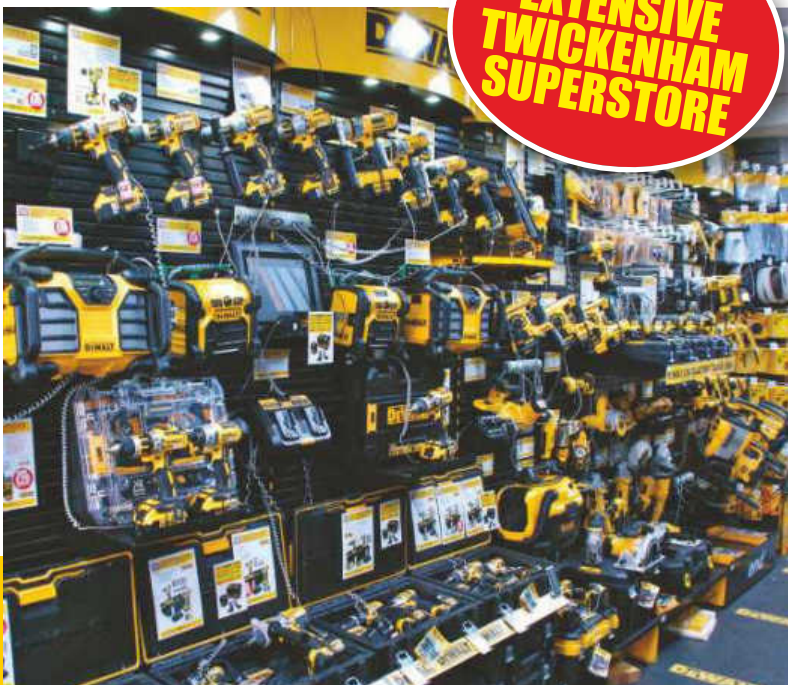


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# Purpose-made planter

Using some simple materials, **Andy King** employs the Kreg Foreman tested in this issue to knock up a quick and easy purpose-made planter, then paints it with General Finishes Pearl Effects paints



**W**ith the Kreg Foreman at my disposal for review (see page 18 for the full test), it made sense to make good use of it to knock up a quick and easy project.

I've been doing a bit of a garden revamp and I have a small retaining wall that I want to put a long planter on to grow some herbs, so nipping in to B&Q, I picked up three decking boards, a couple of lengths of batten and a couple of square spindles, which set me back about £25.

As the timber is tanalised it should last a fair few years, if left in its raw state, but I decided to give it a coat or two of the new Pearl Effects paints from General Finishes (see full test on page 16), which will help to give it an even longer life span.

## Cutting to length

So, first things first, the deck boards need to be cut to length. Laying the spindles on top of the wall at the back and front positions to determine the width of the planter, it's simply a matter of marking the length directly to the deck board or you can measure the distance (**Pic.1**).

Using the marked board as a template, I cut four the same length and used the same method to set the length of the planter. As the planter will be two boards high, I wanted to allow a little extra on the legs so that the boards wouldn't sit directly on to the wall.

Using a deck board as a gauge, I cut the legs from the spindles allowing enough to also cut a point on the top as a feature; this will also help with shedding water from the end-grain (**Pic.3**).



**STEP 1.** Using the spindles as legs, set out the width required and mark the deck board to length





**STEP 3.** Using deck boards as gauge blocks, mark the legs to length and cut to size



**STEP 4.** Setting the miter saw to 30°, cut a mitre and then rotate the leg



**STEP 5.** Use the shoulder line as the gauge and make a second cut, then rotate and repeat



**STEP 6.** Once all four cuts are made, you should end up with a pointed top



**STEP 7.** Place the parts together to check everything is correctly sized



**STEP 8.** The pockets are made in pairs and applied to each piece



**STEP 2.** Cut all the deck boards to length using the miter saw, or by hand if you don't have one

Cutting the legs to length, I then set the miter saw to a 30° mitre and made a series of cuts (**Pic.4**), rotating the leg after each cut to make four cuts in total, which will give the leg a pointed top (**Pic.6**). Cut all four legs in this way.

### Pocket-holes

I then used the Kreg Foreman to make the pockets on the back face of each board, placing a pair of pockets in each piece and at both ends (**Pic.8**).

Before screwing the boards to the legs, I wanted to leave a back set quirk, so I placed the deck boards on a piece of 6mm MDF with the leg sitting directly to the bench top to set the quirk. I also used the thickness of the decking as a margin to set the board position up from the bottom of the leg.

### Slatted base

Each board is screwed into place; it's easier to screw the shorter pieces to the legs to make two end components and then screw the longer boards into position (**Pic.10**). With the basic planter box assembled, it just needs a floor to support the earth for the plants. A solid bottom will retain water and start to rot prematurely, so I used battens to make a slatted base (**Pic.13**). The box will be lined with polythene to keep the moisture away from the timber but will have a few holes punched through to prevent it becoming saturated if there are any heavy downpours.

The batten base is simple enough: screw a couple of full length battens to the long sides and then cut a series of short battens that are

## Project: Garden planter

screwed to these longer battens (Pic.14). I used a batten as a spacer to leave gaps all along the length as I screwed them into position.

### Dividers

As I want to keep the plants separate to stop one from overtaking the other, I also screwed in a couple of dividers from the decking using one full width and ripping one down to allow for the batten base, then screwed these into place (Pic.15). As it is a long planter, these dividers also help to stop the sides from bowing out once it's filled with earth or peat.

From here it's just a matter of getting the paintbrushes out and giving it a coat or two of suitable protection, get the plants in and then it's ready to go. Not bad for £25 – a purpose-made planter knocked up in around an hour! **GW**



STEP 9. Each board should have four pockets, ready to take the screws



STEP 10. The long boards are drilled for pockets in the same way



STEP 11. Using an MDF packer, the boards are screwed in – note the decking spacer for the board position



STEP 12. The long boards are now screwed to the end panels



STEP 13. Battens are screwed inside at the bottom, ready for the base



STEP 14. A series of short battens are then screwed in to the long battens



STEP 15. A couple of dividers help keep the sides from bulging out

If you'd like to use General Finishes Pearl Effects paints to apply an iridescent finish to your planter, see Andy's test on page 16 for instructions

# schepach

WORKSHOP

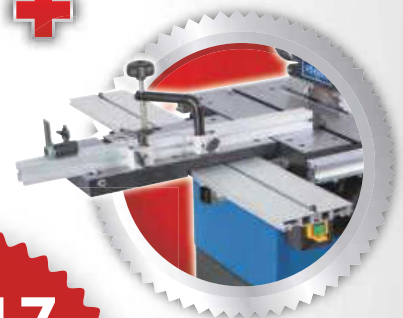


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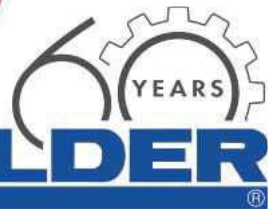
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# Win BIG with Felder



To celebrate their 60th anniversary, Felder are running a fantastic competition in conjunction with *Good Woodworking* and *The Woodworker* magazines to find three of the best furniture makers across the UK – there's also some fantastic prizes up for grabs

Over the next six months, we will be running this fantastic competition in conjunction with Felder Group UK to discover who can make the best piece of furniture. The competition is open to anyone over the age of 18 regardless of skill level.

The piece you enter can be any size, from a small bedside cabinet up to a large wardrobe – the choice is yours! Simply decide on the piece you'd like to make, document the process, then submit it by following the entry details overleaf.

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## ENTRY DETAILS

To enter the competition, you must email a selection of step-by-step and process photos of your hand-made piece of furniture, which documents its build from start to finish (no more than eight photos, please), along with a short description of the piece and the processes used to make it (no more than 500 words, please).

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Felder Group UK will select five finalists from all those who enter, each of whom will be invited to bring their piece to the Milton Keynes showroom to be judged by an expert panel, consisting of master craftsman and furniture maker, Peter Sefton; award-winning furniture and cabinetmaking expert, John Lloyd; Felder Group UK director, Matthew Applegarth; and *Good Woodworking* editor, Tegan Foley



### Important information

- Due to email server size limitations, please ensure to send low resolution photos. For ease of judging, attach all photos and text to one email rather than sending multiple emails, which could potentially get lost
- Please outline your name, address, age and the piece of furniture you've entered at the start of the email (preferably in the subject heading)
- Please note that finalists must cover the costs

of transport to the judging ceremony and any costs involved in transporting the piece

- Entry is open to UK residents with a permanent UK address. Only one entry per household is permitted
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- All entries should be emailed to [tegan.foley@mytimemedia.com](mailto:tegan.foley@mytimemedia.com) and should be sent no later than 17 February 2017 – postal entries will not be accepted
- Only one entry per person; multiple entries will be discarded. Employees of MyTimeMedia Ltd and Felder Group UK are not eligible to enter this competition
- To view our competition terms and conditions in full, please visit [www.getwoodworking.com/competitions](http://www.getwoodworking.com/competitions)



## 60 years of Felder

It was 60 years ago that Johann Felder, together with his wife Gertaud, founded Felder as a company. Johann Felder junior created and worked in his workshop, in his parents' home. In the same year, 1955, they were already presenting the first Felder woodworking machines at trade fairs all across Austria.

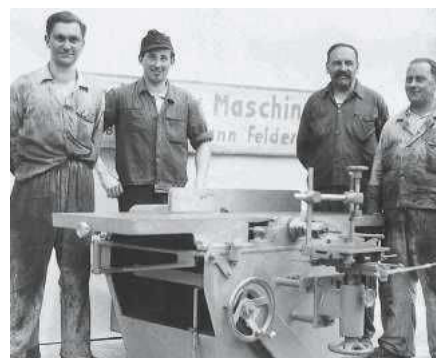
Strong, down-to-earth and always ahead of the times – with traditional values, pioneering machine concepts and high quality products – the machine engineering company developed in the following years from being a specialist for combination machines only to a complete supplier of professional woodworking machinery for workshops, business and industry. With one of the largest ranges in the industry, Felder

customers are now able to get everything they need all in one place from one supplier.

60 years later, the Felder Group has around 400 employees at the company's headquarters in Hall in Tirol and is classed as one of the worldwide leading suppliers of woodworking machines for hobby, business and industry. There are more than 200 sales centres in 72 countries selling over 150 models from the Hammer, Felder and Format-4 brands.

In 1997 Felder brought the new brand – Hammer – to life and it soon asserted itself with high quality yet affordable woodworking machines proving highly successful against cheap products from the Far East. The success enabled further expansion of production and assembly in 1999. The new assembly hall No.2 increased the capacity by 30%.

Format-4 was introduced in 2001 as the premium brand for the highest requirements in business and industry and completed the product range of the Felder Group in the professional segment.



Workers at the Felder factory back in 1955

In the years to follow, the product range was expanded to include CNC processing centres, edgebanders, beam saws and heated veneer presses.

### FURTHER INFORMATION

To find out more about Felder Group UK, see details below

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\* VIDEO DEMONSTRATION BY ALAN HOLTHAM.



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# Stepping up from hand saws to powered saws – PART 1

In the first of a new series, **Peter Bishop** looks at the variety of powered saws available and offers some great tips on getting the best from them

**T**he same rules apply to powered saws as do to hand saws. They must be well maintained, sharpened and set correctly to cut easily and cleanly, and they should be used with care.

Lack of concentration can be seen all over my hands! Everything from regular nips of a blade when starting a cut through to stupid carelessness when using powered saws – I’m lucky to have all my digits intact. So folks, we’ll never be without them but do treat all your saws with the due level of respect they deserve.

## Knowing your saw

All saw teeth are shaped, sharpened and set to cut through the object material. Some are for metal,

some for plastic and building blocks but ours are, mainly, for wood and wood products. The tooth shape and size will determine the type of cut made. A series of large ones will generally be for rapid cutting, which may not need to be that accurate. A series of smaller ones will give a better and more precise cut providing all the associated factors are correct.

Those other factors will be mainly focused on the ‘set’ of the saw teeth, which allows the blade to move freely behind the cutting edge, in the saw ‘kerf’.

Generally speaking, saw blades will have their teeth spring-set alternatively to one side and then the other. This balanced setting allows side clearance for the blade and creates the width of cut otherwise

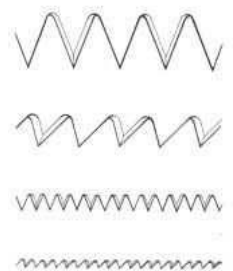


FIG 1. A range of different-sized saw teeth



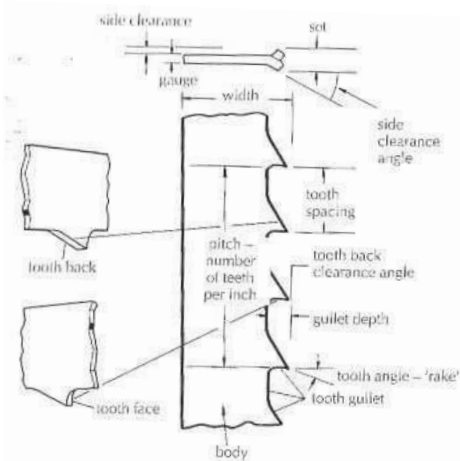


FIG 2. The basic structure of saw teeth, in this case a bandsaw

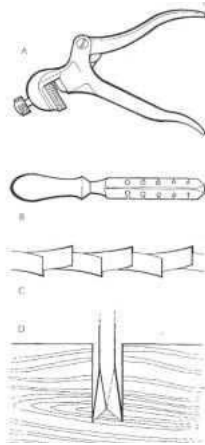


FIG 3. Saw sets and the importance of kerf: a) pre-set saw set; b) a hand set; c) plan view of a 'set' saw; d) set correctly, the 'kerf' will give clearance of the blade



FIG 4. All rip saw blades are designed for fast, deep cutting. The harsh tearing action of a steel rip blade makes it generally unsuitable for any sawing operation other than timber ripping, whereas the cutting action of the TCT equivalent makes it suitable for general conversion duties in a wide variety of materials



FIG 5. The supporting body of the cutting tip is 'relieved' or ground back (X) so that only the cutting edge itself makes work contact



known as kerf. All hand saws will be sharpened and set in this way as will powered ones, including those such as chain or reciprocating saws. To test for the kerf, simply run your finger along the side of the saw blade, in the opposite direction to the cut, and you'll feel the rise and fall as each alternate tip is skipped or set. Take care and be gentle if you do this. Some of the modern hand saw blades are sharpened to cut in both directions!

### Sharpening & setting

Most sharpening and setting will be done prior to purchase. Once the blade is blunt it will, most probably, be discarded. Obviously there are exceptions.

Traditional, expensive hand saws can have their cutting edges restored as can chainsaws and circular saws. The cheaper, store bought hard-edged hand saws are another matter. These, once the edge has gone off, are difficult to sharpen and are easier to simply replace. The same applies to blades for jigsaws, bandsaws, scrollsaws, etc.

### Tipped saws

Tipped saws offer an alternative to those conventional spring-set ones described above. The majority of powered circular saws are now tipped with tungsten carbide or high speed steel; TCT or HSS. The replacing, sharpening and setting of these types of blades has to be done in a professional workshop where the grinding of the teeth to shape and size can be controlled. Tipped saws offer quicker and cleaner cutting creating less heat in the blade and thus, hopefully, providing longer cutting edge life. Generally TCT is tougher and will last longer but HSS will have a sharper and slightly cleaner cut. In both cases, a tip is created on the top cutting edge of the saw tooth. This tip is shaped so that it cuts both sides of the blade at the same time creating the kerf for the blade to travel through.

A pre-formed cutting tip is either inserted and brazed into a small recess in the top of the tooth, TCT, or, as

with HSS, a heated drop of the hardened steel is welded in place. Once this pre-shaped or drop of steel is fixed in place, it is then 'dressed' with grinders to produce the cutting edge and side clearance required. Obviously there's a lot more to it but this is the basic methodology employed. Tipping saw blades is not restricted solely to circular saws. In more commercial environments, bandsaws are more commonly tipped to provide longer life, thus helping to improve productivity, etc.

### Craftsmen of old

Having banged on about this for a while you'll have gathered that, like all tools, keeping your saws sharp and in tip-top condition will help produce great projects without too much frustration.

I can't cut a straight line with a hand saw easily - that's quite an admission and leads nicely on to my next statement: "I believe that if the old craftsmen had access to power tools, then they would have used them." Why? Because they were using state-of-the-art equipment for their time period so, if they'd been around, powered saws would have been commonly seen in the 18th- or 19th-century workshop. You'll either agree or disagree with this so let's move on and take a look at some of the powered saws that are available to us today.

Your choice of tools should reflect how and where you might use them. If you are making workshop-based projects, then fixed machinery on stands is best. If out and about working on your or other peoples' houses etc., then cordless or cabled is convenient. Some semi-portable machines, such as chop saws, can also be taken to site. So think through what tool will best suit your use and then go out and buy the most cost-effective one.

### Hand-held powered saws

Boy, have these improved since I first started using them some 50 years ago! I'm just going to describe the generic tools and not go into the pros and cons of cordless or otherwise. However, one small point: if it ain't got a cord, then you can't cut through it!

### Jigsaws

Depending upon the type of blade fitted, jigsaws will cut through wood, plastic, metal and light building blocks. They're a pretty versatile tool and one of the only cutting machines that will remove an inner circle without a leading cut into it. Blades are fitted into the drive, which can be a simple or reciprocating cutting action. Most soleplates – the flat surface upon which the saw travels through the workpiece – can be canted to either side providing extra cutting angles.

Blades vary in length and type: big teeth for quick cutting through wood; small, fine teeth for metal and a whole range in between. For basic, rough cutting, use the big tooth version. Length is important, too. If the blade is too short, then you might find it jumps out of the cut onto the upper surface and either spoils that or breaks the blade.

From an edge the cut can be made straight into the workpiece following the line you have marked. For those inner circular cuts, the best method is to drill a hole that is large enough to accommodate the blade. Pop the blade into this hole before you start the cutting action, then follow your line to complete the job.



Various examples of jigsaws and blades

### Circular saws

These wee beasts can be vicious little tools! But, as always, if used correctly they provide a very useful addition to any workshop. They're especially good for cutting down large sections of sheet materials, especially if you don't have a panel saw or some help. There's a whole host of different sized hand-held circular saws now on the market, both with or without cable. The smaller ones are great for trimming and the larger ones for bulk, bigger cutting.

Blades will be available in different sizes and with options on their tip type. It's always best to fit the size recommended by the manufacturer. Spring-set blades, as described overleaf, will produce a fairly rough cut. TCT or HSS tips will be more uniform. As with the jigsaw cut, use some scrap stock to establish which is the best, finished face before you start work on your project piece. Depth of cut is usually determined by adjusting the soleplate. Most designs will have it hinged at one end, with the blade guard underneath. An Allen key or wingnut will secure and allow you to move the blade so that it just cuts beyond the thickness of the workpiece. Some soleplates will



also have an option that allows you to make an angled cut and, generally, you'll have a fence attachment that allows regular widths to be cut.

### TIPS FOR USING CIRCULAR SAWS

- When cutting, rest the front of the soleplate on the workpiece and feed the saw in gently and firmly. Don't over-reach yourself and stop the saw if you need to move rather than stretch
- Whatever you do, do not fix the blade guard up. They are designed to cover the moving blade at all times apart from when it is in or penetrating through the workpiece. An unguarded blade will lead to trouble!



Various examples of circular saws and blades

## Alligator saws

I'm not quite sure why these are called 'alligator' saws but they are; maybe it's the look of them? As a more heavy-duty saw they are not often found in the workshop. A little like a large, powered hand saw there are twin blades fixed into the drive side-by-side. The teeth on each blade are set to one side or the other and each one is driven back and forth, alternately, in a spine arrangement, thus creating the cutting action. Because of the blade design, the kerf is generally quite wide so this is not a saw for fine cutting.

As an on-site tool, the alligator saw comes into its own. It's pretty versatile and can cut through large baulks of timber and the softer building blocks. It's also, in my opinion, much safer than a chainsaw but not nearly as robust. There are variations on this twin-blade arrangement using a small cutting chain instead, like a mini chainsaw. These are called alligator 'loppers'; a bit like a very large pair of powered secateurs they are designed for pruning - not for the type of work we are likely to do.



Various examples of alligator saws and blades

## TIPS FOR USING ALLIGATOR SAWS

- ⚙ Start the cut with the base of the saw held firmly against the workpiece, where the blade comes out of the body. With the blades moving, lower the blade to make the cut

## Reciprocating saws

These saws, sometimes know as 'sabre' saws, are a bigger version of a jigsaw and look a bit like a very large, powered pad or compass saw. They tend to be powerful and can have long blades, which are driven back and forth, on a cam, mimicking the action of a hand saw. Blades up to 250mm long are available to cut a variety of materials.

These saws have a variety of uses and, if you like having a range of power tools to hand, are a useful bit of kit. Due to their size and versatility they are often found on building sites. With the choice of blades available they can cut wood, metal and plastic. Some are designed to penetrate, without a starter hole, things like ply and sheet materials. >

## TIPS FOR USING RECIPROCATING SAWS

- ⚙ Place the small 'shoe' against the workpiece to start off. If you don't, the blade will bite and jerk the saw out of control



Various examples of reciprocating saws

### Chainsaws

I suspect chainsaws are probably responsible for more saw-related accidents than any other. This is due to the vast number that are sold for use with little or no instruction. I do strongly advise that if you are contemplating buying and using a chainsaw that you undergo some instruction before you purchase; this will achieve two things: firstly, you'll learn how to use one properly and, secondly, you'll then be able to determine the type and size of saw you need.

Once you know what you are doing these are great saws for quick, rough work and, in the right hands, can produce some very delicate results such as carved animals, etc. Most of us will use a chainsaw for cutting firewood or rapidly chopping bigger boards or planks to length. For manoeuvrability, a petrol-driven saw gives you the flexibility to work well away from the workshop. They are noisy. The alternative, quieter option is a cabled, electric saw.

Choose carefully depending upon your end use. There are 'baby' chainsaws like the 'lopper' described overleaf, right through to monsters that can cut right through a stack of wood in one go. For general purpose, use a blade that's 450-600mm long - that should be adequate.



### TIPS FOR USING CHAINSAWS

- ⚙️ Make sure the workpiece/log you are cutting is firmly fixed in place. To start a cut, feed the saw into the workpiece from the base. If trimming branches, for example, always keep the trunk between you and the blade
- ⚙️ Avoid 'shrapnel', nails, etc., when cutting – you'll see sparks fly if you don't miss them! Always keep the cutting chain sharp; a blunt saw can be really hard work



Various examples of chainsaws and one in use

### Chop saws

These chaps are not really hand-held but are often mobile so they sort of drop between the above classification and the static ones that follow. Originally made as a circular saw that simply chopped down from above to cut material to length, they are now a lot more sophisticated. Some you can simply fit on to a flat work surface and others have dedicated stands that can be left in one place or moved on and off site.

The chop saw, or mitre saw if you wish, is a favoured site tool that can produce a variety of cuts, straight and angled, ideal for roof building, etc. In a workshop, a swivelling head will enable compound mitres to be cut with ease and the joints are really tight and clean. If you're contemplating buying one of these, try to purchase the ones that offer more options. Sliding heads have further reach and swivelling heads allow for a much wider range of angles to be cut. **GW**



### TIPS FOR USING CHOP SAWS

- ⚙️ The cut with one of these saws is generally clean, with little splashing, from both faces. When cutting a mitred frame, I tend to work from underneath on one end first, then turn over for the other end. This saves moving the saw head around and resetting the 45° angle each time



Various examples of chop saws and one in use

### NEXT MONTH

In issue 310, Peter will move on to looking at larger, static, fixed-bed power saws, including bandsaws, rip saws, cross-cut saws and scrollsaws

# schepach

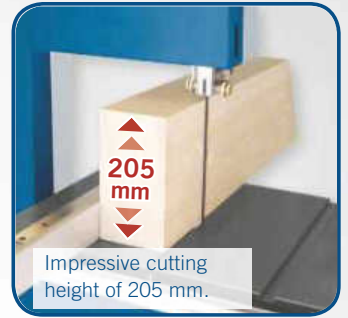
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# Sitting perfectly still

Edward Hopkins works to plan and follows his own inclination

I've been putting together a glasses cupboard for James and Katie's kitchen. I thought I'd do something simple just to maintain progress. Wrong again. I left it to James to design, measure, SketchUp some plans and email them to me. The cupboard has to accommodate a slanting, overhanging section of wall; it has to be no deeper than an adjacent partition wall, and it has to house a variety of shapes and sizes of glasses. I don't think I'd have come up with anything much different but what he sent me was far from straightforward.

## Putting the structural cart before the horse

It is normal to build a case to hold shelves; fit a thin backboard; screw a batten to the wall to take the weight, then pin the top of the cupboard back to the wall with mirror plates. If there is any danger of the cupboard slipping off the batten, a couple of screws will stop it. But for stylistic reasons, James doesn't want a batten on the wall. This has consequences, putting the structural cart before the horse. Now the lower backboard is the strongest element and we'll screw straight through this into the wall. The backboard supports the middle upright (screwed from behind) and that in turn holds an end of each shelf (also screwed). The cupboard carcass is then

substantially secure even without the outer case. The sides are rebated for the shelves and backboard; the bottom is tongue & grooved into the sides so that it cannot possibly drop out, but beyond that, only glue holds it in place.

The backboards were easy enough to make and so were the doors. The frame components by themselves looked like no trouble either (as long as I remembered various rebates) but there came a time when I was less interested in what my calculations said that measurements should be, and more interested in what they actually were. To know this I had to dry assemble what I could and measure not the theory but the reality. It was not, however, an easy structure to cramp and this led me to my biggest worry: final assembly. I was reluctant to use nails on the outside, though they would have been effective if dovetailed (the cupboard will be painted so they could be punched home and filled). I don't have any good quality PVA but besides, the shelf housings provide no long-grain join to be glued, and end-grain gluing is less effective. Simon down at the builders' merchants sold me some polyurethane glue instead. I have used this before and it is convincing. It runs like golden syrup and within a few minutes it begins to gently foam, thus filling any gaps. Within 30 minutes it sets.

PIC 2. The freshly plastered wall was not completely true and as James tightened the three screws under the top shelf into the wall, the cupboard distorted just a little and the doors skewed. He'll have to correct this with washers to space out the screws – not a fun job. He also has to acquire some 4mm toughened glass, knobs and magnetic catches. And he has to paint the whole cupboard. It just goes on and on



PIC 1. Where's another long clamp when you need it? With time ticking and the glue expanding, I had to act quickly. The little G clamp holds two sash cramps pinned together just enough to pull that left-hand side in tight





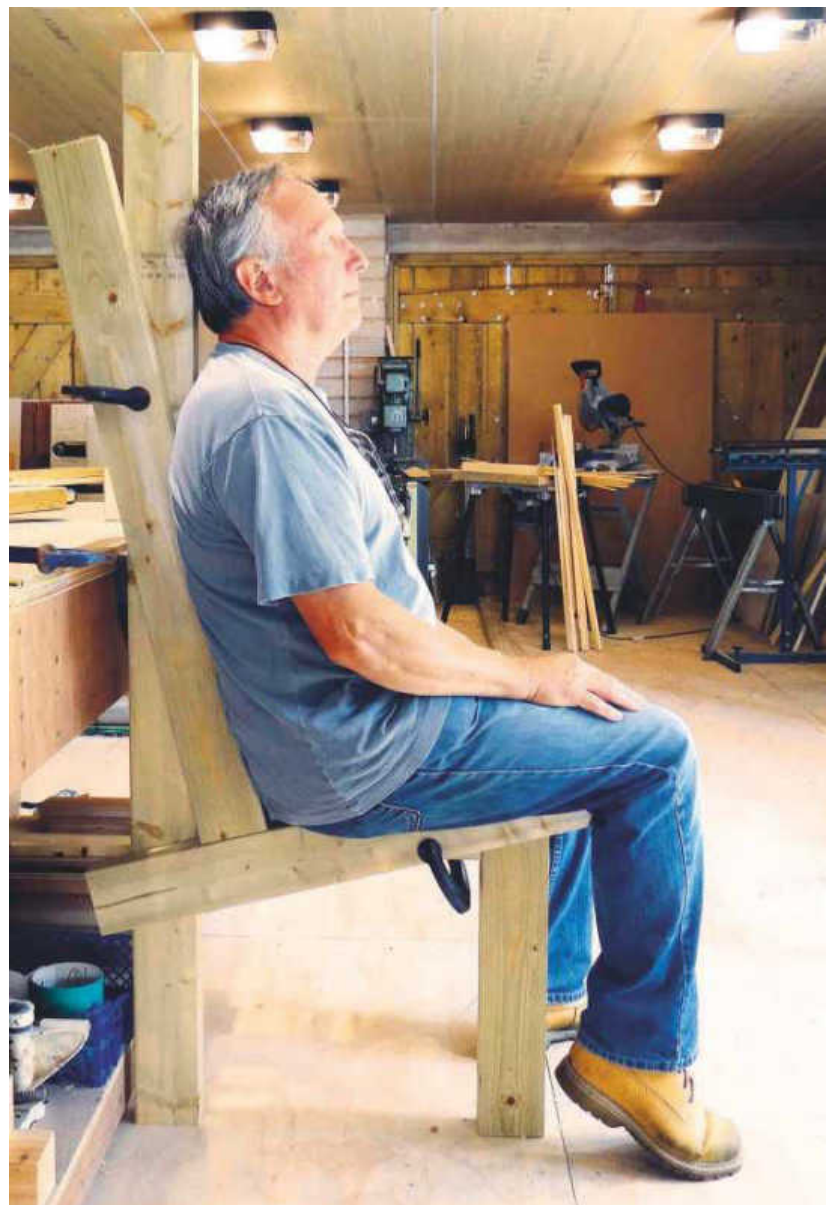
PIC 3. I thought I'd seen the chair construction somewhere before! It's in the log shed (see previous article in GW298)



PIC 4. No, that's not going to work



PIC 5. This shows far more promise



PIC 6. The single buttock test. At this stage, the secondary frame can be cramped at any angle and a ponderous attempt can be made to see if it would be comfortable. Already, though, I realised that the chair would look a lot simpler, and be easier to make, if all the planks were of the same width, so that also influences the angle. My heels are off the ground because the chair is too tall. 100 x 50mm tanalised sawn timber (which these days is as good as planed) received some hefty mortise & tenon joints. My pot of aforementioned polyurethane glue had another starring role

You have to be organised then; have your cramps at the ready (**Pic.1**) and know that your assembly will go together well. Effective though the glue is, it is messy. Most of my joints had turned out well but the foam still oozed regardless. I scraped some away while it was soft but I think I'll be better off cutting it away when it's dry. The glue did, however, save the day. Jacques Loussier was keeping me company with suitably frenetic piano, and as he came to a triumphant finale, so, with great satisfaction and relief, did I.

### At the bottom of the garden

I'm now going to have some fun. I'm going down to the bottom of my garden. There, a few years ago, I planted a roundhouse or, to be more precise, I stuck 100 or so willow twigs in the ground and they, with their amazing joie de vivre, are now growing into a lanky hedge. One day I will lay them and weave them and make a sort of rustic Iron Age shelter in which to hide. In the meanwhile, I hide there anyway from time



to time because this circle of growth, every time I walk into it, floods me with a sense of peace. It is remarkable. I don't think I'm making it up. When I'm there I feel wrapped around with goodness (which, of course, I am). At the moment I sit on a yellow plastic chair. That's alright, but the land is sloping and the chair is wobbly.

I want to make a chair that won't mind the driving rain (at least for several years); that is level despite the terrain, and acknowledges the very special place in the centre of this willow ring.

I ripped into shape a dozen or so 4.8m lengths of 4x2 sawn. No I didn't. Well I did, but only in miniature. I'd sketched several designs that looked as though they



PIC 7. With just one bolt in place, the secondary frame can be swivelled just a little to ensure that the planks fit the angled back



PIC 8. I've scribed units into walls before, but I've never scribed a chair into a hill. I might have levelled the ground instead, but to do so would, in my mind, impinge too heavily on the landscape: I want to tread more lightly. Initially the chair back was one plank higher but that really was superfluous. I hadn't realised until I put the chair in place that a front fascia would be needed to balance out the chair's visual weight

might be striking, elegant and witty but my imagination was not vivid enough to be sure that my angles weren't too clever for their (and my) own good: I needed to mock up a model (Pics.4&5). This stage of woodworking is fantastic - literally. Like a minor deity you can form a structure as wild as you like and destroy it with a swish of your hand, making space for another.

I fiddled around with my strips of scaled 4x2 for a couple of hours and then a design dropped into place. It wasn't where I'd been heading. I wanted something triangulated and oblique; as much a sculpture as a piece of furniture, but I found myself returning to right angles. When I arrived at my final design, I had the feeling that I'd seen it before. Was it in some other chair I'd made? Then I realised that no, it was in my log shed (Pic.3).

No matter how hard you try, you just can't get away from yourself. A little part of me was disappointed: I wanted to develop, progress, and surprise myself. A bigger part was quite pleased: the log shed worked well and so too should its cousin, the chair.

There was one great advantage to this construction. It should be possible to make the two pairs of frames that comprise the two sides and, prior to bolting them together, cramp them in place, adjusting the angles so that the chair has just the right contour. I want it to be erect; not slouching like a deck chair; but it should be comfortable enough to keep the sitter there for a long time gazing between the hazels and oaks down to the meadow, across to the brook, out of sight of anyone except swallows, buzzards and distant cows.

Even with head-scratching along the way, the chair took me only a day and a half to make: it is far simpler >



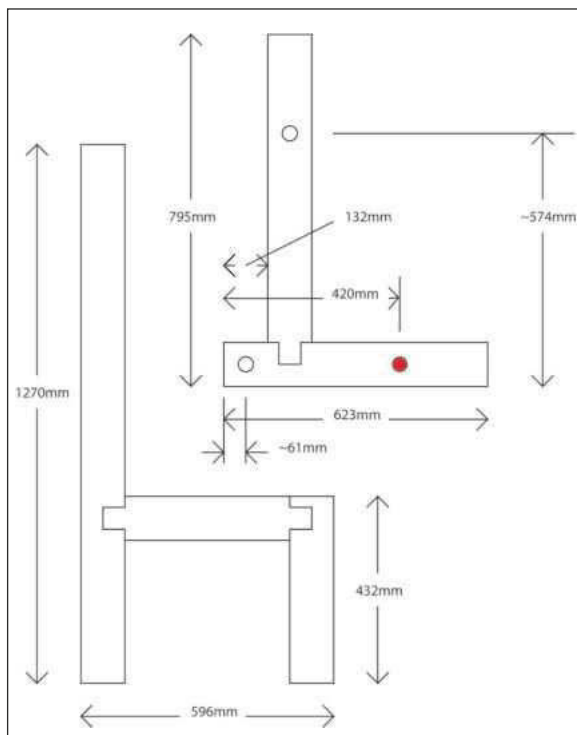
PIC 9. I disassembled the chair and applied two coats of preservative, being particularly generous on the end-grain. I'm going to have a problem mowing round this thing! I don't want to move it each time. I guess it'll be a job for shears. Rats!

than it looks. A mortiser makes light work of the joints. I used a radial arm saw for the rest: simple though it is, the cuts should be neat.

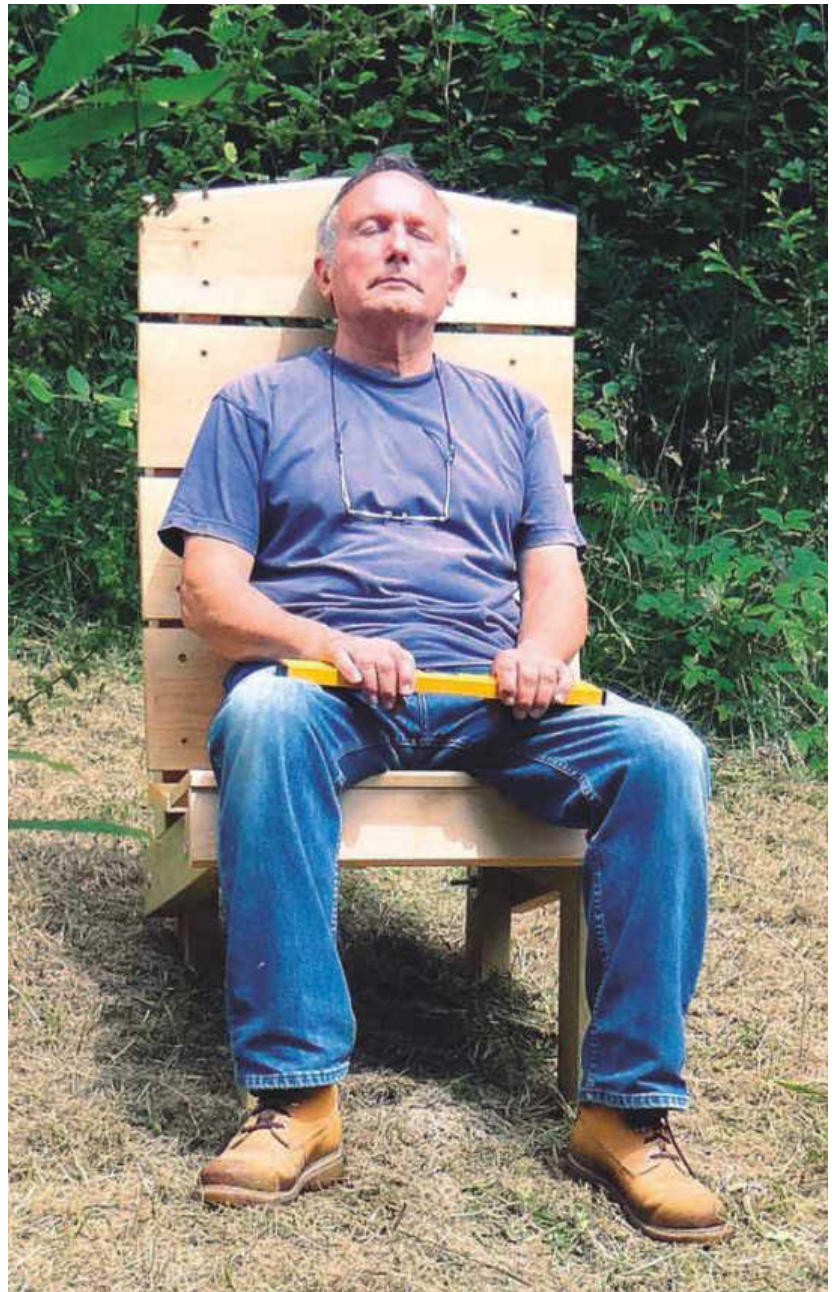
The below drawing is only vaguely to scale and the joint detail, merely an impression. I suggest you make the 'L' shaped frame over length in all three directions. The 'H' frame can be made as marked. I've only shown one definite bolt hole because this is the first: the next two ('~574mm' and '~61mm') should be marked out when you get to them in real life so as to accommodate the width of the planks. The six boards that I used were 200 x 25mm planed joinery pine cut to 610mm lengths. If you have different width planks, then you'll have to shuffle and shift a bit. Cramp the frames together and check the spacing for the planks before you drill the bolt holes in the 'H' frame. **GW**



**PIC 10.** It's not particularly elegant from the back, I admit. I could have softened those 100 x 50mm struts with angled cuts, but this end-grain is the most vulnerable to rot, so I preferred to leave it at a minimum. One step more in decorative detail might be acceptable (like the pointed top plank and the chamfers top and bottom), but detail must be kept in scale and this is, after all, made from sawn tanalised building timber and delights in not being fine cabinetry. (Actually, I don't think I agree with myself. The more I look at this, the more I think four 45° cuts halfway along the top of the struts would improve the back view)



**FIG 1.** Plan for the garden chair



**PIC 11.** Minor amendments are for another day. Right now I'm running the heel, double buttock, spine and neck test. Let me think. Let me take my time over this; it's wrong to make snap judgments. One must be rigorous. The only way to be really sure is to stay here for quite a long while

## A perennial point about safety

I'd make a rubbish carpet fitter; I wouldn't be much better as a monk, and as for being a star footballer sliding along the grass after scoring a spectacular goal, I couldn't even start: I've done my knee in. Bloody bursitis and I'm not being abusive. A few days kneeling on the ground (with kneepads) fitting rendering bead on the garage and my lower leg looks as though it's been in a bullfight. However, (the optimistic human spirit always says), I'm the lucky one. I'll be better in a couple of weeks.

James jumped off a small pile of logs in his yard, landed badly and tore the ligaments of his ankle. He'll be hobbled for many months. Now I don't expect you to be interested in my family's medical history, I just think it emphasises the perennial point about safety. You can always keep your hands behind the chisel; you can clear the clutter from the floor, but what you can never do is guard against the unexpected. The flip side of that is to be grateful for every day when nothing awful happens

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# EAT YOUR HEART OUT!

**Dustin Van den Abeele** uses a clever, simple and cost-effective method to make this set of outdoor chairs and matching table, which will be adored by youngsters



I decided to make some heart-shaped kids' seats and flower tables to match. The project is fairly easy and the end result is very pleasing – ideal for outdoor use or for a child's bedroom or playroom.

## Making a template

You need to start out by making a heart-shaped template in polystyrene, but you could also make it in cardboard or paper. I prefer to use polystyrene as it's easier to trace the shape onto the OSB (Pic.1). Keep a kid's size in mind when making your template – my seating is around 200mm high. Next, trace the outline onto the OSB (Pic.2). You could use MDF (but only if the chairs are intended for indoor use) or plywood. I used OSB as the seats I made were to be used outside.

## Cedar ribs on the outside

Next, take two OSB hearts and space them 400mm apart; you can then start nailing down

the cedar ribs (Pic.3). I used a mini-brad nailgun for this. I also used window spacers to place between the cedar ribs so that the little gap between them is uniform all the way round (Pic.4). This isn't just for cosmetic reasons: the space between the cedar ribs ensures the wood dries faster if the seats are left outside in rainy conditions.

You don't have to use cedar for this project; you could use pine or Douglas fir, for example. I used cedar as this is an ideal material for projects that are intended for outdoor use.

## Cedar ribs on the inside

After placing the cedar ribs on the outside, I decided these should go on the inside space as well: this not only looks better, but also makes the seats a great deal stronger. After I made my first seat, I decided to add all the ribs on the inside first and finished adding all the ribs on the outsides of the seats, which makes this task a lot easier.

## Painting

I decided to paint my seats white with a red interior, to echo the heart theme, but you could use any colours you wish. I also made a flower table to go with the seats, using the same method as described here. Simply make two templates: a large one (for the table top) and a smaller one (for the bottom), then connect them with ribs. **GW**

## MATERIALS & EQUIPMENT REQUIRED

### Materials

Polystyrene (for the template)  
OSB (for the sides)  
Cedar ribs (18mm-thick × 30mm wide × 400mm long)

### Equipment

Table saw (to make the cedar ribs)  
Jigsaw  
Mini-brad nailgun



STEP 1. For the template, you can either use polystyrene, cardboard or paper



STEP 2. Trace the outline onto the OSB



STEP 3. Take two OSB hearts and space them 400mm apart; you can then start nailing down the cedar ribs



STEP 4. I also used window spacers to place between the cedar ribs so that the little gap between them is uniform all the way around



STEP 5. Once you've finished adding all the cedar ribs to the outside, the seat should look something like this



STEP 6. The ribs on the inside not only add to the aesthetic value but also give the chair additional support



STEP 7. The seats and tables all ready for painting



STEP 8. The complete set of chairs and matching tables



# MACKENROW GAME TABLE

Made using black walnut with brass inlay, **Jory Brigham's** stunning Mackenrow table tennis table harks back to a '70s aesthetic and is sure to stand out in any games room

*"Success, for me, is knowing I've done everything possible to give each piece a voice and its own personality"*

– Jory Brigham



**FAR LEFT:** One of the most important and labour intensive steps of the Mackenrow is the core. In order to avoid any sagging, a combination of MDF and metal are used to give it strength

**LEFT:** The top of the table is made so that the wood grain, as well as the brass inlay, wraps around all three surfaces, starting from one end to the opposite end



The mitres are cut, and the ends are glued and clamped before the two halves are joined so that the brass inlay is seamless



Festool Dominos are used to join the two halves, as well as almost every other joint on the Mackenrow



Game, set and match!

**H**eralded as the 'Steinbeck' of modern woodworking, master woodworker and craftsman Jory Brigham's pieces come to life with a fusion of new-fashioned creativity rooted in classic, mid-century sensibilities.

Growing up among generations of woodworkers and craftsmen, Jory discovered his own creative voice at an early age: "In my approach," he says, "I allow the material to dictate what the outcome of any particular piece of furniture will be. I don't want to ruin a piece by putting too heavy of a hand on it. You're going to get something with a lot of personality and soul."

Creating pieces of furniture that borderline the functional and aesthetic, Jory aspires to build pieces that evoke conversation and are shared from generation to generation.

## Play for keeps

'Whiff-whaff' has come a long way from its humble beginnings. Starting as a game soldiers would play to kill time, using books to mark the net and a golf ball to volley, in contemplating this design Jory wanted to create a modern version of the classic table while staying true to his philosophy. Forged from walnut, the Mackenrow, part of the 'Boardroom Collection' and winner of *Interior Design's* Best of Year Awards, is accented with a strip of bright orange along the sides. Featuring a tasteful brass inlay and a classic Danish-weave net, the Mackenrow stands out in any games room.

## Construction

The entire table is constructed of solid black walnut and the top is made of 22mm material, which is joined using the Festool Domino. "We make sure to use full lengths of boards so that each piece of wood is continuous from end to end and the grain matches," Jory explains. A strip of 9.5 x 12mm brass is used for the centre inlay. The brass is mortised into one side of the top two pieces before gluing them together, making sure to keep it flush with the top, then any discrepancies between the brass and



## JORY BRIGHAM DESIGN WORKSHOP

Jory also runs his own furniture making courses. If you want to make your own pieces, join Jory on the central coast of California for one of his hands-on courses. Build your own piece that you take home, along with the methods to take the designs in your head and turn them into actual pieces. Find out more here: [www.jorybrighamworkshop.com](http://www.jorybrighamworkshop.com), and to see more of Jory's work, visit his main website: [www.jorybrigham.com](http://www.jorybrigham.com)

the walnut are sanded out. For the legs, Jory starts with 75mm walnut and tapers it down to about 45mm at the feet, then the vertical leg is joined to the horizontal rail using the Domino. "The net is the most intricate part of the table," Jory says, "as well as the most time-consuming. Each component is carefully joined and glued. Like all the other pieces we fabricate, we use templates and a router to clean up around the joints and shape the final detail of each component, which keeps each piece consistent with the next one." The table is then finished using the Festool SurFix, which is a combination of oil and wax. **GW**



The completed saw bench on the Bosch stand

# DIY circular saw

Not content with other circular saws on the market, **Andy Brough** sets about making one to his own personal specifications, and the results speak for themselves – DIY is definitely best!

**W**hy would you want to build a circular saw? There are dozens of cheap circular saw benches available at competitive prices; some of the less expensive ones are around £150. The question is, have you ever looked closely at any of them? A few of the expensive brands attach their names to some of the Chinese offerings but such a name does not enhance the quality, I can assure you. I was in

the market for a sub £400 circular bench saw so have done a vast amount of internet research, watching of YouTube videos and visiting DIY shops. Nothing inspired me to buy one. There seems to be an attempt to offer everything, but nothing has any quality – from flexible tables to the nastiest cross-cut fences. I do actually have a small circular saw – a 200W Proxxon fret table saw (**Pics.1 & 2**) – which is of superb quality but only cuts up to 18mm with care.



PICS 1 & 2. My old Proxxon saw, which gave me inspiration for this project

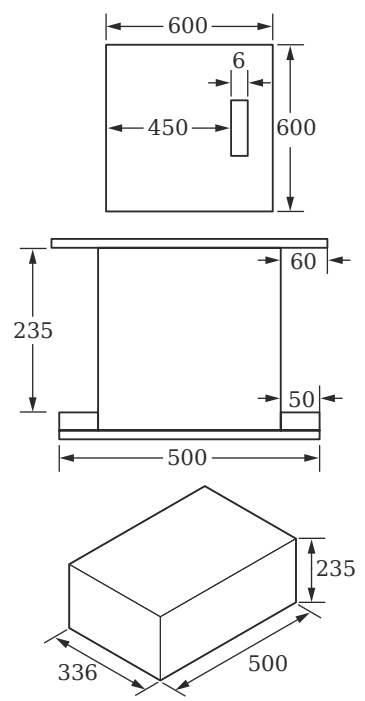


FIG 1. Homemade circular saw



A larger version of this would have been ideal if they made one, albeit probably too expensive. One really good feature is the hinged top to which the circular saw is attached, allowing easy access for blade changing and cleaning.

### The saw

So, I decided to make, in effect, a larger version of the Proxxon using a quality circular saw as the power unit and spindle. Bearing in mind I was after a moderately-sized saw, I chose to look at the 180/190mm saws. Leaving aside the plunge saws, which are very expensive and probably not appropriate for this use, I was surprised to find that very few had riving knives. A quick check of the regulations seemed to indicate that they were to be used but it seems manufacturers are leaving them off. Of the top brands, the only one I found in the chosen size was Makita. Their 5704RK (Pic.3) is a superbly-made trade saw with no gimmicks, just solid construction and of course the riving knife, which is easily removable for plunge cuts. The instructions explain in detail how to set the riving knife and the thickness of any extra saw blades that are fitted. The quality of the 12-tooth rip blade supplied was excellent so I also bought a Makita 60-tooth for cross-cutting. These blades are specially produced for this saw using thin gauge plate and small carbide teeth to reduce load while sawing. Again, the quality of the cross-cut blade is very good and the teeth very sharp and I did accidentally cut myself while handling the blade, which has never happened before!

### The top

When not in use the saw bench was to be stored on a shelf so the size of the top was predetermined by the available space. 600mm square seemed to fit the bill so melamine covered chipboard was chosen as this would provide a hard top and one that timber could

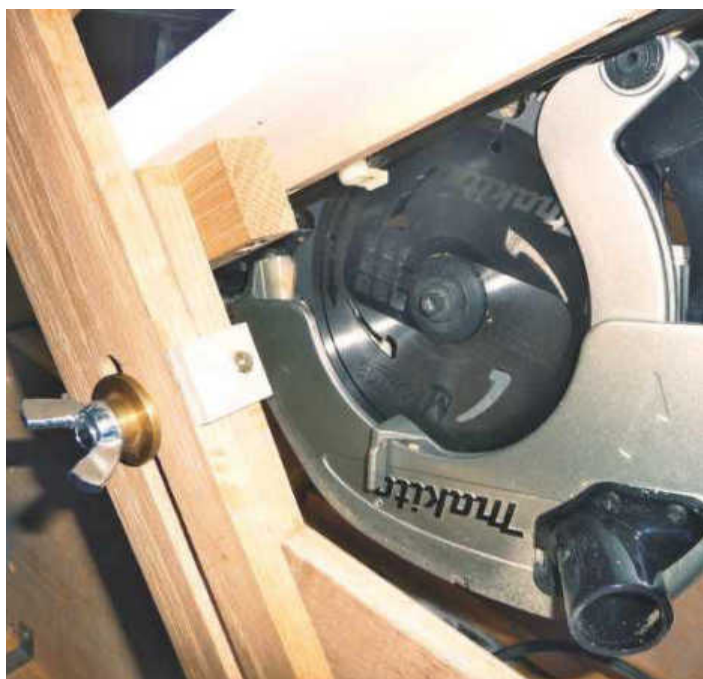
slide across easily. I know a local furniture maker so asked him to cut me a perfectly square 600mm top out of best quality 18mm board edged all round. Easy when you have a large panel saw and an edgebinder! One has to decide on the depth of cut and the Makita specification said 66mm and I wanted to be able to cut up to 51mm, so the saw base had to be recessed into the top by 5mm, which will ensure that the teeth clear the maximum cut by a couple of millimetres.

The next decision to be made is whether or not the saw needs to tilt. A tilting saw will require a larger blade opening and an infill piece to close the gap in normal use. I prefer to use a 45° jig to cut mitres rather than tilt the blade, so a permanently vertical saw was my decision. The whole accuracy of the bench depends upon the correct lining up of the saw plate to the edges of the top. It is vital that the blade is parallel to one edge as all cross-cuts will be done on a cross-sled running off the 600mm width, and of course, the rip fence needs to be at right angles to the blade. The first task is to thoroughly check the saw baseplate to the blade; both that it is square with the long edge parallel to the blade, perfectly flat and can be accurately set at 90° to the blade. Some tweaking may be required but the Makita saw was perfect out of the box. I would guess the Triton saw would be good as this is designed to fit in their own benches. Some saws droop when inverted as there is flex in the frame and adjustments due to the weight of the motor hanging down. Some sort of strap to hold the motor in place could be used but once again, the Makita stayed at 90°.

On my 600mm-wide top I decided to have the saw blade 450mm from the left-hand edge, as I naturally stand to the left of the blade pushing with my right hand. Left-handers may reverse this but the saw's motor is also on the left when upside down so is therefore more

central – useful when the saw box is made to encase it. The first task is to cut the saw slot. For this you have to remove the riving knife to allow the saw to plunge into the chipboard. From the underside of the top I marked where the saw blade will be, plus a little longer to accommodate the riving knife. Using a saw guide clamped parallel to the edge, I plunged in and slid the saw to cut the marked slot. I had fitted the 60-tooth blade for this and plunging from the underside reduces the surface breakout. I then added two steel rules to push the saw away from the guide to increase the slot width and repeated the cut. You'll need the slot to be at least 6mm to be able to replace blades without removing the saw. I cleaned up the slot with a sharp chisel and file to make it neat.

The next step requires time and patience to accurately place the saw in its final position. Because I'm going to rip on the left of the blade, the saw blade is as close to the left of the slot without actually touching. Of course, you're doing this with the top upside down so take care! Take a great deal of care in lining up the clamp rail parallel to the side. Once happy, it's a good idea to screw lengths of timber around the base of the saw so it's a tight fit. Remove the saw and draw along the inside of the timber batons. You now know exactly where to rout out the recess for the base. If I'd had a suitable top bearing-guided cutter, then I would have used the batons as the guide for cutting. I elected to remove the batons and using a 12mm plunge cut bit, measured the offset required and used the clamp rail as the guide to rout to the inside of the lines. After that it's simply a case of removing the rest, which takes a little time. You need a really flat area for the base to seat on. To avoid the router tipping over, I left an island in the centre so the router base was always on two surfaces. The island was later removed with a sharp chisel. You could >



PIC 3. The heart of the saw – the Makita 5704RK in situ



PIC 4. An array of breathing holes allow the motor to suck in fresh air

construct a false extended base for the router, which would make life easier.

The hard bit is now done. The saw should fit snugly into the recess and be perfectly square and parallel to the respective edges. My saw is held in place with some nylon clamps that were originally bought for fitting secondary unit double glazing some 30 years ago! With the height reduced to suit, they hold the saw in place perfectly. It really depends on how often you expect to remove the saw. I would suggest countersunk screws through the top and metal clamps and wingnuts if you want to regularly use the saw hand-held.

Don't forget to replace the riving knife and follow the setting instructions. The great thing is that the relationship between the saw and the top will always remain the same, which is really important as on many of the saws I looked at, there was relative movement between the top and the blade. My 2ft guide clamp became my fence as it seemed to pull up square. I added a 6mm face to the right-hand side, which stopped after the blade to reduce the possibility of jamming. It's my understanding that rip fences should never project beyond the blade for this reason. I scribed a line to the left of the blade with a straightedge touching teeth at the front and rear of the blade. This was heavily scored and inked in with a marker pen and wiped off the surface with meths.

### The stand

As my saw will live on a shelf when not in use, I needed a stand to which I could quickly fix the

saw bench. One base stands out: this is the Bosch GTA 600 table saw stand at around £70, which I bought from Axminster Tools & Machinery. It's designed for their own site saw, is really excellent, folds quickly, and is light. You'll struggle to find a better one.

### The saw box

I am obsessed with keeping my workshop clean and saw benches are not compatible with this ethos. My main hobby of model aeroplanes means that I have many airframes in the workshop and some have a fine film of exhaust residue, which attracts dust like a magnet. So, like the Proxxon saw, the idea is to make a box and hinge the top. Having some leftover 18mm good quality ply, I made the sides from this with butt joints and screws. The bottom was 6mm ply with strips of 18mm pine on top on the long sides, which fit under the clips of the Bosch stand. The catch, which locks the saw in place, clips over a cheap hinge as you can see from the photos, and it works well!

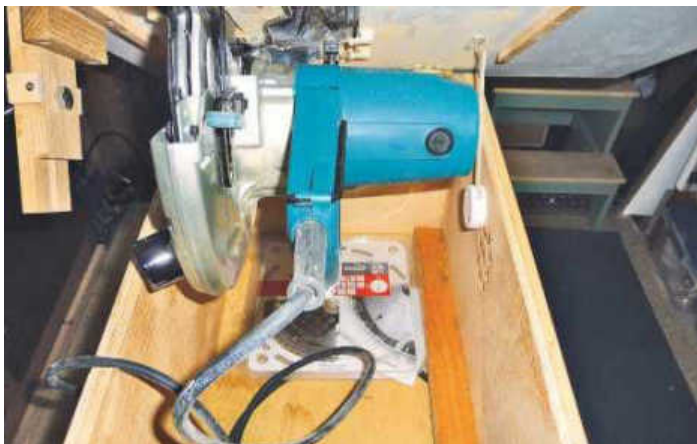
The saw is a 'neat' fit in the box so to avoid overheating, I drilled some 10mm holes opposite the motor intake so it can suck in clean air (Pic.4). At the far end of the box is a hose tube that my extractor (Henry) pipe plugs into; this should keep the floating particles from finding their way into the motor. The top is hinged to the operator end of the box and fitted with a stay to gain easy access to the saw and to vac out the inside. No catch is needed as the weight keeps it shut. A small notch allows the saw cable to reach outside (Pic.5). While I

was at Axminster, I also bought a no-volt release switch so the saw can be safely switched on from the front while the switch on the saw is held on with a tie wrap. Again, for regular use by hand a hook-and-loop wrap would be better.

### Cross-cutting

Unless you have an expensive commercial saw, all of the cross-cutting slides are pretty useless and, in my opinion, the best way to cut across a piece of timber is to use a sled. These are not widely used in Europe but used extensively in the USA almost always without any form of guarding. This can be overcome, however.

For the slide, I made runners out of the 18mm ply, with the edges against the top to reduce wear. The bottom of the sled is 6mm MDF to minimise the loss of cutting capacity. The front and back pieces are spare lengths of timber that must be at least 75mm high to still have strength when the slot has been cut. Use clamps to set the two runners to the sled base to achieve a good sliding fit. If the sides are parallel, then you should get a jiggle-free fit. Run some screws through. I didn't use glue in case of adjustment later. The front and back pieces are set parallel to the table, again with clamps. I fixed one end and then adjusted the other end to be in line. The other end is not critical as it's not used as a fence. Set the fine-toothed blade at maximum height and being especially careful as there is no guide, run the sled through the blade and switch off without sliding back. Test on scraps of wood for squareness. If adjustment is required, take one



PIC 5. Inside of the box showing the stay and cable router



PIC 7. The rear of the blade shows how the blade is close to the left-hand side of the slot



PIC 8. Height adjustment and extraction for the guard



PIC 6. Cross-cut sled in place showing extraction and safety block on the rear



end screw out, tap, and put the screw in a different location. Add extra screws once happy.

## Guards

It seems that crown guards are not easy things to buy as spares and I didn't find any for a 200mm saw. A Google search revealed all manner of guards; some with extraction but mostly not. Fortunately I know a local company that make guards for machinery so a phone call soon gave me good information and a reserved offcut of 5mm polycarbonate. A short visit and £20 later I had a rather large offcut and some ideas. The cross-cut sled was easy: a strip 150mm wide to bridge the front and back pieces was all that was required. This also makes the slide much more rigid. The only way I could cut the strip was with a handpoint hand saw – it was hard work! I could saw to length on the Proxxon, which can be set at a very slow speed to cut plastic. I cleaned up the long edge with a hand plane to good effect. A suitable length of plastic tubing to take the roof mounted extractor pipe was fitted through the guard. I drilled the hole with a 32mm Forstner bit, which I had to sharpen to get it cutting on my pillar drill's slowest speed. A short length of the tube was hot glued into position.

So there you are, a safe to use cross-cut sled with extraction (**Pic.6**). I also added three blocks of 18mm ply to the rear of the saw slot (**Pic.7**) so once the maximum height of the blade reaches the rear fence, the blade is a long way from being exposed. I can guarantee perfect cross-cuts every time from now on.

From this piece of polycarbonate I had to fashion a crown guard with extraction. Remember, we have no means of attaching it to a riving knife as this is below the height of the blade. Eventually I found a suitable plastic pipe from an old vacuum cleaner tube that fitted the end of my roof extractor. This tube forms one half of the bracket that holds the crown guard. The guard components were cut on the Proxxon and the finish was superb. There are no retail available solvents for polycarbonate so the pieces had to be screwed together, which was painful! I used some small 10mm long self-tapping screws from my modelling supplies. I had several goes at the pilot holes and they ended up not much less than the outside diameter of the screw. As the screws go in they drag plastic and bind up, but once in will never come loose! Once again, I used the Forstner cutter to create the hole in the side of the guard. This was not stuck in place but a 15mm oak collar was created and screwed to the guard and the tube.

The right-hand side of the top is the location for the guard support; this was all fabricated from the same piece of oak and the photos should be self-explanatory. The bracket fastened to the underside of the top is very slightly away from the edge so that when the wingnut is tightened, there is a small edge to grip on to rather than just the flat face. In practise, it has not come loose. The height of the guard can be quickly and easily adjusted (**Pic.8**), from nothing, to well above the blade to allow partial cuts in thick timber. Its other important function is in making you aware of the blade's location even when you can't see it and

therefore eliminating the chance of you passing your hand over it as it exits the wood.

## The proof is in the pudding

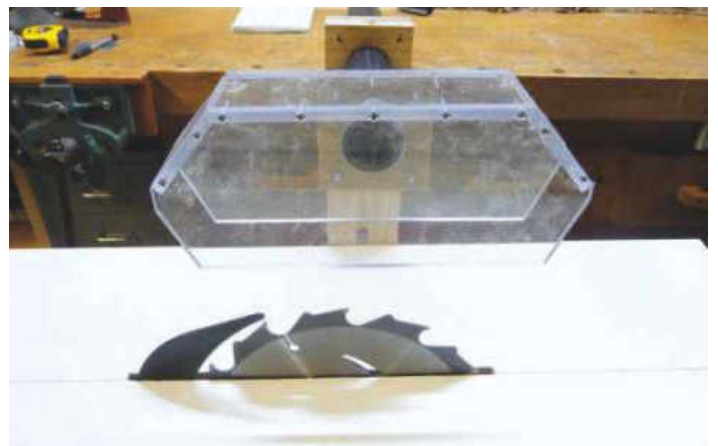
Was all the effort worth it? Most definitely, yes. The saw is very quiet both because of the Makita itself and the sound proofing of the 18mm ply. It is extremely accurate in both modes. It's pretty safe as saws go. Wide pieces to be ripped have to have the crown guard removed but in that case, the hands should be well away from the blade. Narrow strips cut from wide boards are best cut on the right-hand side of the blade to keep the guard in place. The resultant airborne dust is better than any saw I've had or seen. I have two vacuum cleaners: one for the saw box and the other for the guards. The box requires regular cleaning out as all the dust seems to accumulate in there. The saw should also be thoroughly cleaned as it's not designed to work upside down. I keep the spare blade in its plastic cover inside the box, and the Allen key is located on the saw. Changing blades is not so easy but then it never is with a circular saw...

## What did it cost?

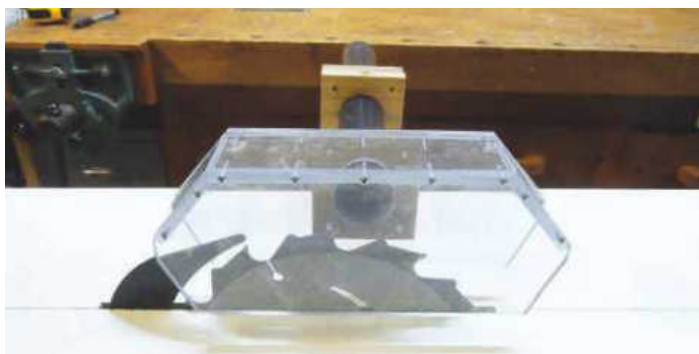
The Makita cost £94 from B&Q; the Makita 60t blade cost £21; the NVR cost £31 and the stand cost £70. The rest came from the workshop. For £216 you cannot buy a saw of anything like the quality of this one! My £600 Chinese Scheppach I had some years ago was certainly no better, produced a lot more dust and was very difficult to clean. **GW**



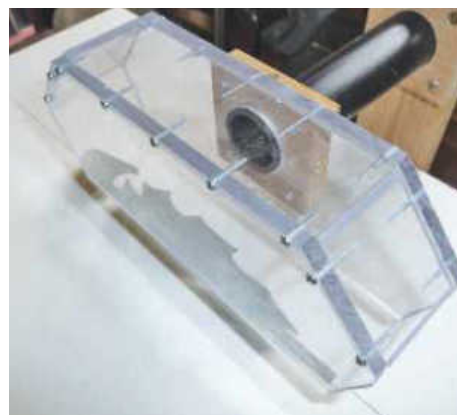
PIC 9. Close-up showing guard construction



PIC 10. The minimum...



PIC 11. ... and maximum height range of the saw guard as it is independent of the riving knife



PIC 12. Close-up of guard showing construction

# ✉ Letters & Makers

## Letter of the month

### A tale of an old saw

Hi from Sydney, Australia.

I bought issue 303 of *Good Woodworking* a few weeks ago, but have been too busy to look at it until now. I note the news piece on page 11 regarding Wolf Tools and while it is now far too late to enter the 'Oldest Wolf Power Tool Competition', I do happen to have an old Wolf power saw in my workshop.

I looked on the internet for an email address for Wolf Tools so I could contact them, but couldn't find anything. Perhaps somebody from GW might be able to help?

I have a Wolf saw, which is supplied in a black heavy metal carrying case, although it may have originally been green. The label on the box says 'Wolf 7" Electric Saw Kit – Type R.S.7'. On the saw it says: '7" Wolf Portable Electric Saw – Type RS7A; serial number: 988440, made in England'.

If possible, I would like to find out when it was manufactured, purely for interest's sake.

The saw belonged to my father-in-law who was a builder in Sydney. It still operates properly but is rarely used as it is quite heavy.

I really enjoy the magazine. I'm in trouble with my wife as I don't throw any issues away and the pile is now getting quite high!

Kind regards, **Anthony Asquith**

*Hi Anthony, thank you so much for your email and I am thrilled to know that we have readers in Australia – how fantastic is that?! I'm so glad you enjoy the magazine and many thanks for supporting GW.*

*Unfortunately the competition closed at the end of March, so you're a little late, as you say, but I would*



👉 Anthony's saw is supplied in a very heavy black metal case

*love to feature a photo of the saw and your email in our letters section, if that's OK with you?*

*I'd be happy to pass this on to Wolf Tools, however, and hopefully they may be able to help in terms of the date of manufacture, or perhaps we can put that question to other readers of the magazine? I hope that answers your question and helps a little? Thanks so much again for getting in touch and apologies to your wife for all the magazines that you keep accumulating! With very best wishes, **Tegan***

*Hello Mr Asquith,  
Greetings from a fellow Australian working for Milwaukee Power tools in the UK. It was wonderful to see the photo of your Wolf saw. This model was certainly manufactured in 1965 (and years before and shortly after) in the Wolf Power Tools, Hangar Lane, London factory. I worked there in the '60s after moving to London from Adelaide, where I also sold Wolf Tools.*



👉 Manufactured back in 1965, this saw is a real workhorse!

*This is a great saw; a true workhorse. This model sold mainly in Commonwealth countries and was very popular 'Down Under'.*

*Wolf Power Tools became Kango – Wolf, which was acquired by Atlas Copco in the 1970s (who adopted me along with the factories and tools). Kango Wolf was then acquired by TTI (Milwaukee AEG Power tools) where I am still working today.*

*Just as an aside, I recently purchased a Kango hammer made in 1935 and it is still working. We proudly manufacture Kango hammers today under the Milwaukee Kango name.*

*Wolf manufactured very well-made tools and the company was responsible for many iconic tools and innovations. I still get requests for parts and surprisingly can still find some today.*

*Thank you for sharing your photo and story; you certainly brought back some wonderful memories and brightened my day.*

Regards, **Roger Hall**

### Forum thread: friction polish

Hi, any ideas as to why I get fine lines when using friction polish? I usually sand down to between 320/400 and even 600 grit when finishing commissions and spindle work. Quite often, after a few coats of friction polish, I notice I've built up a number of polish ring lines around my work instead of achieving a dead smooth finish. It drives me crazy! How can I stop this from happening? Any tips would be very much appreciated.

**Gerald Meager**

*Hi Gerald, yes, it would be interesting to know why this happens. I have some friction polish but have not used it that much as I tend to stick to the various varnishes or the three-wheel buffing system, depending on what I am covering. **Derek Lane***

*Hi, less friction polish would probably be the answer. As with all polishes, too much builds up rings. When you buff it up, you'll probably need to sand it back or use meths to melt it so you can wipe the excess off, then re-friction polish it or rebuff after the excess is wiped off. As with all polishing, less is more as they say – i.e. thin coats, as friction polish is the woodturner's version of French polish. I hope this has been helpful.*

Regards,  
**Eric Harvey**

When applying friction polish to an item on the lathe, less is always more ➔



## WRITE & WIN!

We always love hearing about your projects, ideas, hints and tips, and/or like to receive feedback about GW's features, so do drop us a line – you never know, you might win our great 'Letter of the Month' prize, currently a Trend Easyscribe scribing tool. Simply email [tegan.foley@mytimemedia.com](mailto:tegan.foley@mytimemedia.com) for a chance to enhance your marking capability with this versatile workshop aid



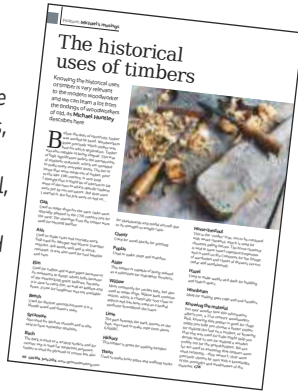
## A word of praise for GW306

Hello Tegan,

I once again feel compelled to congratulate your team on issue 306, which I have just finished reading. There were many enjoyable articles in this issue, but one that really caught my attention was Michael Huntley's 'Musings', which looked at the history of how different kinds of woods were used. I have never read anything like this before, and it was definitely an eye-opener. Perhaps a more exhaustive article could be produced in the future covering international woods as well? In any case, thanks again. Blessings, **David A. Moody**

Hi David, thank you so much again for your kind words; it's so nice to know that what we're producing is being well received by the readers, and also teaching you some things you didn't know! I will forward your request on to Michael, who is unfortunately just about to retire from writing. However, he did promise me he would write the occasional article in the future, so fingers crossed this will be on his list! Tegan

Michael Huntley's 'Musings' ➔



## One to watch: Patrik Cotton

21-year-old Patrik Cotton from Shropshire has been passionate about woodworking from an early age, and it has since developed into his main hobby and career path. Working from a small garage, Patrik manufactures and puts together his pieces, which range from furniture for indoor and outdoor use, to random one-off pieces such as the carved spoon pictured below, which was shaped entirely using a Stanley knife.

For the majority of his pieces, Patrik uses recycled wood, and in most cases, he finds he has to clean it up prior to using it. Alongside using recycled timber, Patrik also has a range of old hand tools which he has restored and he currently uses them alongside the tools he has bought brand-new.

Patrik has yet to buy any woodworking machines, so he has to make do with hand tools, which he enjoys as he has a passion for old-fashioned joinery. "An example of this would be my treasure chest," says Patrik, "which I built using mostly hand tools – the only power

tool I used was a drill." The chest is a mix of a discarded plywood box and an old bed frame; it took Patrik many hours to build as the wood was in a particularly poor state. "In the future," he says, "I hope to be working as a joiner manufacturing high-quality bespoke furniture using traditional and modern techniques. It would be a dream to design, manufacture and sell my work as I enjoy joinery as both my hobby and career."

Judging by the quality and diversity of work featured here, it's clear that Patrik certainly has the skills required to make his dream become a reality. We wish him the very best for the future.



➔ We love Patrik's brightly coloured chicken coop!



➔ This wooden spoon was carved using just a Stanley knife



➔ Patrik's treasure chest was made using mostly hand tools

## READERS' GALLERY (via email & forum)

### Ben Hackney

33-year-old Ben from Ashford in Kent has been working with wood for over 16 years; it's not only his job but also a hobby that he's very passionate about. About two and a half years ago, Ben built a workshop at the bottom of his garden and since then he's been building all kinds of projects, from solid oak doors and frames to bespoke furniture made to exact specifications. "Fine woodworking is one of my passions" Ben tells us, "and I love to figure out how I can bring my ideas to life."

➔ A solid oak door, built to commission



➔ Ben's '50/50' box, made from oak and walnut, features a secret compartment – see photo annotations above



➔ Oak mug made using 80 individual blocks of oak. It features a continual ring of end-grain on the base, which also doubles up as a coaster and the grain in the handle follows round from top to bottom

### Derek Lane

Avid forum member Derek Lane loves to post his projects on [www.getwoodworking.com](http://www.getwoodworking.com) for all to see. His latest turning is the wonderful 'Surf & Turf' vase. Made using holly, the piece stands at 180mm tall and is 75mm at its widest point. To achieve the colourful appearance, Derek first stained the vase black (using a black spray ebonising lacquer), then applied Jo Sonja's iridescent paints using a screwed up paper towel and dabbed the paint on in such a way as to create diagonal stripes of alternating colours (green and blue) until he achieved the desired effect. Once dry, the piece was then finished using a couple of coats of spray gloss varnish.



➔ 'Surf & Turf' vase in holly, 180 x 75mm



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ABOVE: Managing Director Neil Stevenson sketching some initial designs for the Georgian bedroom suite project

# Which wood is right?

GW talks to Managing Director of furniture making company NEJ Stevenson Ltd, **Neil Stevenson**, who discusses their commissioning process and shares details of one of the exciting projects they recently worked on

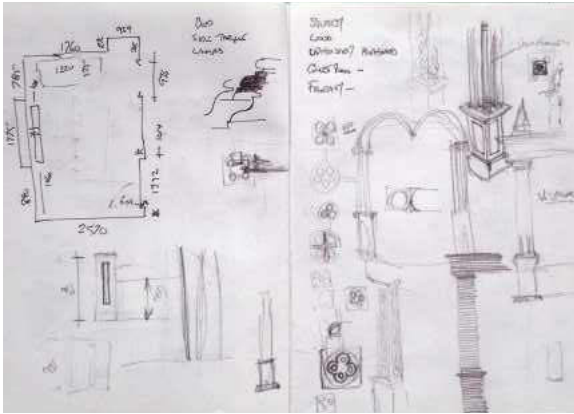
**N** EJ Stevenson was approached to work on a project as part of an ongoing refurbishment of a luxurious yet traditional Georgian property. Neil's brief was to design and create a set of unique, bespoke furniture for a stunning guest bedroom suite. "When I first visited the property and saw the bedroom, I was delighted to find spacious proportions, large Georgian windows and high, elegantly corniced ceilings," he tells us, "I could see from the outset that the room had the scale to house some very ambitious and striking furniture."

## Meeting the brief

As Neil goes on to say, the client wanted an inspiring bedroom with real 'wow' factor for their guests to enjoy. The brief was to design and craft three pieces of exquisite, bespoke bedroom furniture, which included a large wardrobe, elegant dressing table and a unique four poster bed, which was not only appropriate for the Georgian character of the house, but was also to become its talking point.

The client required extremely high standards and requested a luxurious, high quality finish in a dark wood





FAR LEFT: Initial sketches in the design process

LEFT: Crafting part of the four poster bed in the workshop

BELOW LEFT: It took 11 skilled machinists, cabinetmakers and polishers to make the individual pieces



CENTRE: The team working on the four poster bed

BELOW CENTRE: The frame of the four poster bed assembled in the workshop

BOTTOM RIGHT: Crafting the delicately shaped centre rail of the dressing table



that complemented the style of the house. They were insistent that the bed and the matching dressing table and wardrobe were all made to traditional cabinetmaking standards with hand dovetailed drawers, panelled backs and a French polish finish.

Having met the client and considered their brief, Neil started by sketching some initial designs: "For this project, I wanted to explore two entirely different possibilities and experimented with some contemporary designs using Perspex columns. My other designs focused on a more traditional style, inspired by classical craftsmanship. The client loved the traditional designs but also set the additional challenge of giving the bed a contemporary function and incorporating modern technology - it had to hide a television."

### Production drawings

The next stage was the production drawings, which focused on the technical construction of the furniture itself. These specified exactly how each piece of material was to be joined and the joinery techniques used for every aspect of the three pieces. Through regular consultation with the client, the initial designs were

refined over several months until they perfectly met the client's aspirations.

### Final designs

The final designs consisted of an elegant four poster king size bed, measuring 3m high  $\times$  2.1m wide  $\times$  2.9m long. As Neil says, the client loved the elegant details such as the 'post' on each corner of the bed consisting of four, tall handcrafted individual columns, which would give a light touch to the finished piece. The posts would feature ebonised detail on each column, to add contrast to the design. The bed would be finished with an upholstered canopy and co-ordinating headboard to complete the piece.

A remote control rise and fall system with manual override was incorporated to enable the flat screen television to 'magically' appear from the bed frame on demand. The screen would rise up, encased in a specially crafted, matching solid wood cabinet to hide the back of the TV screen.

The substantial wardrobe with ample storage space

and integral chest of drawers was designed to complement the bed. "Making this piece proved to be quite complex in terms of the jointing, as the cornice mitres and scribing were curved to reflect the interaction between the radiused mouldings and the straighter sections," Neil says.

The final piece was a subtle, serpentine fronted dressing table with a more feminine design, featuring a delicately shaped laminated centre rail with a finely worked veneered panel. The delicate legs of the table were turned and tapered to reflect the columns of the four poster bed. The top of the dressing table was solid walnut finished with a glass cover to protect the wood and deliver a practical element.

### Materials

The furniture was to be made in walnut, a wood with a great deal of character, a beautiful natural colour and interesting grain patterns. "It is an expensive wood but delivers a luxurious finish, especially in this case, when French polished by hand to give an exquisite sheen. Burr walnut veneer was an ideal choice to add decorative effect and contrast to the furniture," Neil comments, "we spent a great deal of time on 'book matching' the burr walnut veneer on the wardrobe panels to give a stunning symmetrical effect."

70 cubic feet of English walnut and five cubic feet of English oak were used to make the three pieces of furniture, together with burr walnut veneer for the wardrobe and dressing table.

It took 11 skilled machinists, cabinetmakers and polishers a total of 1,480 hours to manufacture the furniture, and a further 64 hours to dismantle, pack, deliver and reassemble the pieces in the house.

BELOW: 3D render design showing the bespoke four poster bed with integrated TV screen

RIGHT: The stunning bespoke four poster bed with handcrafted columns and various ebonised details

### A rewarding project

The project was hugely rewarding to work on; from the great collaboration with interior designer Mary Barber Fay who trusted in the team's expertise, to the enthusiasm and interest from the client who was involved every step of the way and even visited their workshop near Rugby to see the bed being made. "Ultimately the accolades should go to my talented team here at NEJ Stevenson Ltd, who worked exceptionally hard on this unique project," Neil tells us, "which is testament to their talent and commitment to achieving the highest possible level of craftsmanship." **GW**



RIGHT: The serpentine fronted dressing table with turned and tapered legs

BELOW RIGHT: Close detail of the elegant dressing table

BELOW: The substantial walnut wardrobe features an integral chest of drawers



### NEJ Stevenson's recommendations for selecting timbers

- Use elm for traditional solid seats
- Use lime for intricate carving
- Use oak for exterior building structures and joinery
- Use teak and iroko for exterior furniture
- Use sapele for painted windows and doors
- Avoid using oak and poplar in wet areas: oak reacts badly with iron in damp environments and poplar will turn to pulp

### FURTHER INFO

To find out more about NEJ Stevenson Ltd and other exciting projects they have undertaken, visit [www.nejstevenson.co.uk](http://www.nejstevenson.co.uk)

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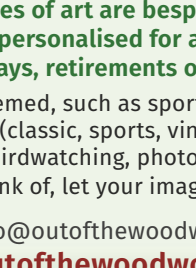
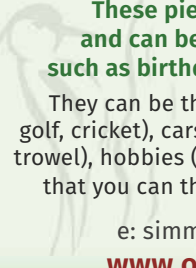
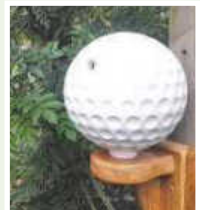
## Art Meets Nature

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e: [simmo@outofthewoodwork.co.uk](mailto:simmo@outofthewoodwork.co.uk)  
[www.outofthewoodwork.co.uk](http://www.outofthewoodwork.co.uk)

# Think outside the bird box!

Eric Simonds' bird boxes really do need to be seen to be believed – never has the phrase 'think outside the box' been more relevant!



FAR LEFT: Ball bird box before turning...

LEFT: ... and after turning

BELOW LEFT: Eric drilling a fixing hole

BELOW: A close-up view of 'Binoculars'



Spotted at the Midlands Woodworking and Power Tool Show by Andy King earlier this year, Eric Simonds' wooden creations really get you thinking outside the box! When you see his pieces you can't help but smile, and Andy was so taken with them that he got in touch with me as soon as he returned from the show, urging me to contact Eric regarding a feature.

Eric's pieces are most definitely eye-catching, and made using British hardwoods and reclaimed timbers, they are ideal for the home and garden, and especially so if there is a big occasion coming up which you want to mark with a themed piece. I just love his bird boxes, which as you will see here, are available to suit any specific interest, hobby or pastime. Eric's unique pieces have captured the public imagination and always create a stir wherever he takes them, so remove that image of a traditional, boring bird box from your head as we get wacky with Out of the Woodwork!

## Starting a business

I started by asking Eric, or 'Simmo' as he's otherwise known, about how he came to start his business, which is based in Suffolk, as well as discovering how his interest in woodworking started. "The business began as many businesses start," says Eric, "by accident." He's

always had a keen interest in woodworking, right from his early days at school, and because of this he's always had a small workshop, both when he lived at home and when he bought his first house. Eric started making bird boxes with a good friend of his, and as he doesn't tend to make things in a normal fashion, he found himself making bird boxes in all different shapes and sizes, and they became more and more outrageous. "The more I made, the more outlandish they were," Eric tells me. "I showed them to a few people and was surprised at their reaction and how excited and interested they became; it was obvious that my designs had great appeal." Eric went on to make a few commissions for people, demand grew as a result, and so the business was born.

## A passion for woodworking

In terms of his background, Eric, the youngest of six children, left school to become an apprentice with British Telecom (BT), and got married at the age of 23 to his wife, Donna. They've been married for 31 years this year and have three children together. "We set up home in North Essex but have lived in Suffolk for the last 29 years," says Eric. "I have always had a wide range of interests with my main line of work being Commissioning Manager for a large integrated security company." Eric tells me he's interested in cooking, wildlife, electronics >

Eric with his  
'Binoculars' bird box



and all things DIY, but woodworking is by far his greatest passion, with birds being his second.

### Bird boxes for all

Having a vivid imagination and liking to think outside the box (the bird box!), Eric tries to link interests and pastimes as subject matter (such as sport or general hobbies, like gardening) to his finished pieces. He takes many items he has made to shows to demonstrate to people what he can do and he never fails to be surprised at the suggestions made by the public, either in passing or by way of commissioned pieces.

Eric tells me that these special commissioned bird boxes make up the largest part of his business and his wife uses various offcuts to make other pieces, such as chopping boards and kitchen platters. "The bird boxes definitely do make up the bulk of what we do," says Eric.

When asked about his most unusual commission to date, Eric says this has to be 'The Grist Mill', a piece made as a Christmas present for someone renovating an old mill and based on the workings of a water mill. Looking at the photo, this is definitely quite a complex piece made up of a multitude of different components and it just amazes me how such an unusual shape can be utilised to also function as a bird box - it really is extraordinary! Looking at the piece, you assume it is purely decorative, but no - this wonderful wooden item is also a cosy home for feathered friends!

Eric prides himself on the fact that he uses British hardwoods and reclaimed timbers exclusively to make his pieces: "Somehow it wouldn't seem right to use anything else," he says. And although many of the bird boxes are painted with vibrant colours, many are left untreated, so the true beauty of the material used really does shine through.

### Design process

The biggest inspiration behind Eric's pieces is definitely birds and wildlife, which was undoubtedly the deciding force in him starting up the business in the first place. "I have been a supporter of the Suffolk Wildlife Trust for decades," says Eric, "I donate pieces to them to help raise money and this is by far the greatest drive behind what I do." It must give this maker great pleasure to know that he has single-handedly given hundreds of birds around the UK the most comfortable and unique of homes!

And the making of bird boxes is a very skilled exercise, given the enormity and breadth of designs he is asked to make. Obviously the notion of a 'traditional' bird box is no use here, as he could be asked to make any manner of designs, from a pair of binoculars, to a motorcycle helmet, to a giant tennis ball! But for every commission, regardless of its shape or size, Eric begins with a scale technical drawing, which gives him all the dimensions and angles required to create a cutting/construction list. "For a commission, I would submit a sketch to the customer for their approval," he tells me. "Although I do have drawings for my work, I never reproduce anything exactly. I like to keep everything unique." From rough-sawn plank to finished product, Eric will typically spend 3-4 days working on a piece before it is delivered to a no doubt, very pleased, customer.

So does Eric prefer working to a brief or to his own design? "We have had some very interesting briefs," says Eric, "and these have been great fun to make but they are also the most challenging. It is a much more relaxed process to make my own pieces."

Eric also has some good advice for fellow makers out there: "Invest in some good quality angle measuring equipment and learn how to use it properly," he says.

BELOW LEFT:  
'Camera' bird box

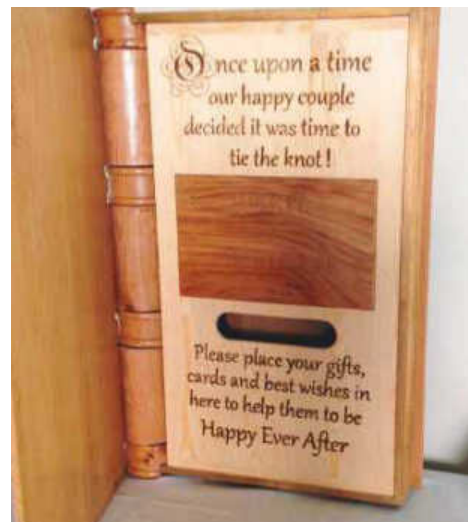
BELOW MIDDLE:  
'Grist Mill' bird box

BELOW RIGHT:  
'Guinness  
Can' bird box

BOTTOM LEFT:  
'Signs of Life' bird box

BOTTOM MIDDLE:  
Eric's famous  
'Flat Tyre' bird box





"Also, don't rely on the angle gauges on your saws and other machines; these pieces of equipment are not expensive and can save you a lot of time and incorrectly cut pieces of wood, which have no other use than to keep you warm!"

Eric tells me that he is currently working on a giant trowel for a customer who purchased a giant fork from him at a show last year - well, you have to have a matching pair! Also in the workshop is a range of windmills inspired by a donation he made to a local primary school's Eco Club. The children wrote letters to ask if he could make some bird boxes in the shape of their school logo, and so he obliged.

When asked about the ethos behind his designs, Eric says that this is borne out of a desire to encourage people, who wouldn't necessarily have bird boxes in their gardens, to think about the possibility of using the bird box as a design feature, either as a focal or talking point: "My bird boxes also encourage wildlife into the garden and become an important part of the garden design rather than just an afterthought," he finishes.

## Working space

When he's in the workshop, Eric's most important pieces of equipment are his dust extractors, and he, quite rightly, takes dust very seriously, choosing to wear a full-face respirator when turning. In terms of his favourite piece, that would have to be his Nova DVR 3000 lathe and he says that he can't do without his DeWalt 305mm radial arm chop saw.

Eric's workshop is in his garage and being a fairly modest size means that it has to be kept tidy and organised, or at least that's the idea! He also gets to enjoy a great view while he's turning and loves to watch the birds in his garden, which no doubt help to inspire him as he's producing his designs.

When making his pieces, although he enjoys hand woodworking, he says that without his power tools and machinery he wouldn't be able to produce what he does. Eric does enjoy hand carving, though, and evidence of this can be seen across a wide range of the pieces he makes. "Carving is a very satisfying process that you can just lose yourself in," he comments.

## Future plans

Woodworking shows form an integral part of Eric's business calendar and you can often see him out on the road with his 'Bird Box Boutique'. "These shows are very important and they enable us to stay in contact with our key suppliers," Eric tells me. They also allow him to maintain a strong social connection with other craftspeople and to see a wide range of new products before they hit the shelves.

When asked about future plans, Eric says that he just wants to continue making bird boxes that are not only functional but become an important design feature in the garden - something he has already mastered.

From speaking to Eric and from seeing the reaction to his work on many people's faces, it is abundantly clear that the woodworking community absolutely love what he does. I think Eric's designs and their popularity will continue to develop and no doubt become more whimsical and fun - after all, being able to create something that makes someone's day is surely the ultimate goal for any maker. **GW**

**ABOVE LEFT:**  
Garden tree seat with hand-carved inscriptions

**TOP MIDDLE:**  
'Windmill' bird boxes

**TOP RIGHT:** Eric turning one of his bird boxes

**ABOVE RIGHT:**  
Wedding book and greetings cards

**ABOVE MIDDLE:**  
Bird box made in collaboration with Derek Mooney - a wildlife presenter and producer for RTE in Ireland

## FURTHER INFO

See more of Eric's wonderful designs on his website - [www.outofthewoodwork.co.uk](http://www.outofthewoodwork.co.uk) - and go to the events section to check when you can next see him and his bird boxes at a woodworking event near you

# Hands-free!

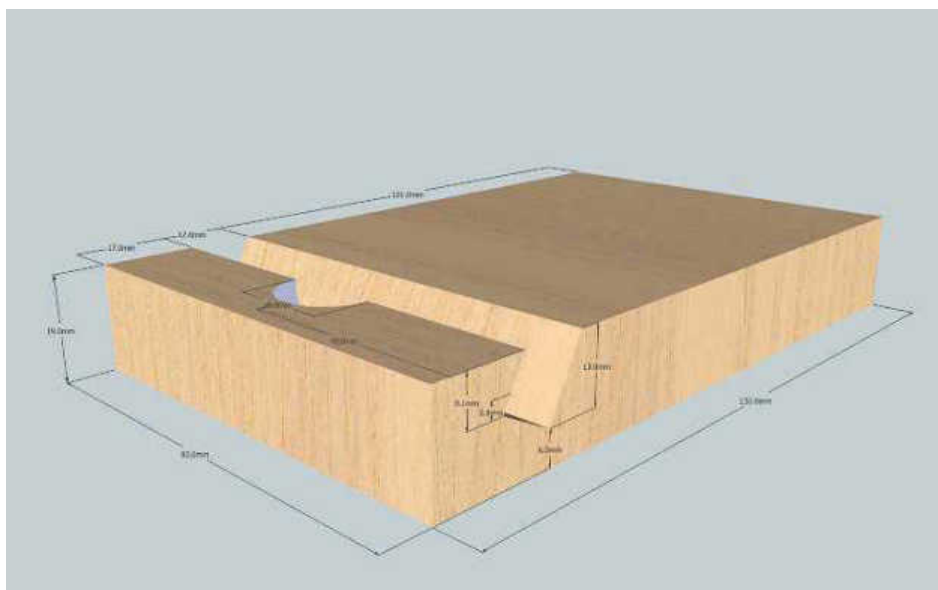
David Bakker shares the secret of how you can make your very own wooden iPad dock/stand for just £5

**Y**ou may have seen the £5 iPad dock (or £5 iPad stand) on the internet and thought, 'I can do that'. And of course you can! I'll save you the trouble of finding out how to make it by giving you the exact instructions needed to make your own version here.

After three days of testing, I can confirm that the wood doesn't scratch the iPad, the iPad doesn't fall over when you tap the screen, and you can use it horizontally while charging. This is a fun little project to make and also has the benefit of being entirely functional. **GW**

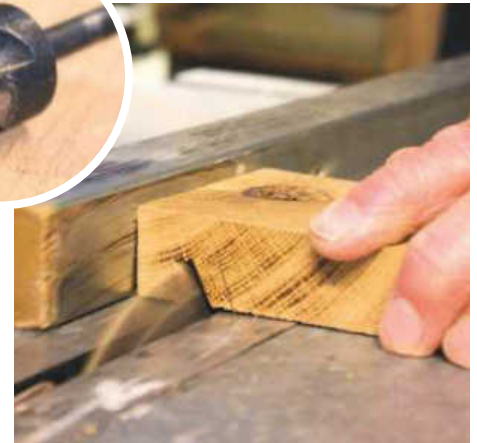
## TOOLS & MATERIALS REQUIRED

Your choice of wood: 130 × 80 × 24mm  
Hand saw or table saw  
Drill  
Large diameter drill bit (I used a 19mm one)  
Range of abrasives



**STEP 1.** The first step is to make a 130 × 80 × 24mm wooden block. The dimensions required for the dock/stand are given above





**STEP 2.** Drill a 10mm deep hole in the block; this creates a small hole that allows you to gain easy access to the iPad's home button. Of course you can do this last, but I found it easiest to do first. Find the middle of the short side and mark it 17mm to the inside; this will form the centre point of the small hole. I use a large diameter drill bit (19mm) to create a nice, smooth hole

**STEP 3.** From the side of the block where you cut the 10mm hole, on the short side measure off 17mm and 30mm; this is where you need to make cuts at 27° – the place where your beloved iPad will sit. Go 15mm deep and clean it out well. You can do this the hard way and use a hand saw, or take the easy route and use an adjustable table saw. **PLEASE NOTE THAT GUARD HAS BEEN REMOVED FOR CLARITY**



**STEP 4.** Make the stand as smooth as you can by sanding down. Ensure the edges of the small hole are smooth so it won't scratch your iPad

**STEP 5.** Congratulations! You've saved yourself a few quid and also hopefully had a good time making the iPad stand – enjoy!

### DESIGN TWEAKS

The same stand can be made using the principles stated here but a little smaller to accommodate the newer, more compact iPads. This version is ideal for the iPad 1-4 or newer models with sleeves

### FURTHER INFO

A big thank you to David and the team for letting us share the secrets of how they make their wooden iPad stands. To see more of the pieces they produce, visit their Etsy shop ([www.etsy.com](http://www.etsy.com)) and search for 'FriendlyiPadStand'



The Wooden iPad Stands team: David Bakker (left), Martijn Aslander (middle top), Annemieke Nieborg (right), and Simon 'iPad Grandpa' Blazer (middle bottom)



We particularly like the bamboo version

These simple stands can be made using any number of different timbers

# Make a simple stool in an hour

In the first of a new series looking at basic projects that can be made using a CNC router, **Dennis Keeling** shows you how to make this simple step-stool



In this new series, I will take you through the design and machining of simple projects using a CNC router. CNC routers are becoming widely used by both furniture makers and home enthusiasts.

In this project we will design and make a simple step-stool using this method. The mortise & tenon joints will be machined using a recessed corner technique instead of hand finishing the corners.

The stool is made from 18mm birch ply. The ply I used is resin-coated birch shuttering ply, which has a smooth black resin surface. This is single-sided profile machining with a 6mm straight edge router. The design, however, is a little more complicated to set up to ensure all the joints fit accurately.

## Design in CAD

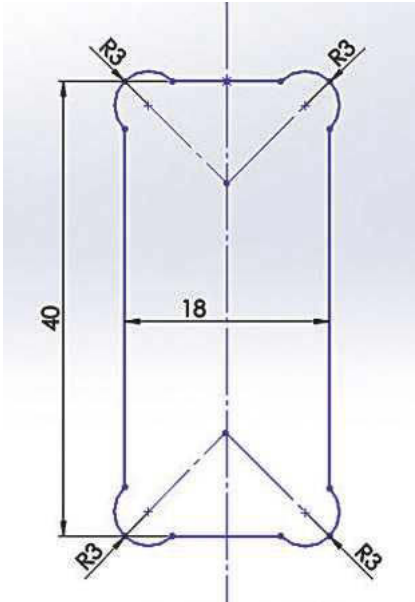
The basic mortise joint (40 × 18mm) has 6mm diameter fillets set into each corner to match the size of the router cutter (**Pic.2**). This is not a traditional fillet that is a tangent to both sides; it is a recessed fillet centred on a 45° construction line and coincident with the join of the two sides. In this way the corners do not have to be cleaned up and the two crescent shapes left in the machining are hardly noticeable.

We are using a tungsten-tipped woodworking router cutter for this project (**Pic.1**). The 18mm material thickness requires a tall router - 6mm or ¼in is the smallest tungsten-tipped router available that will cut to 18mm in depth.

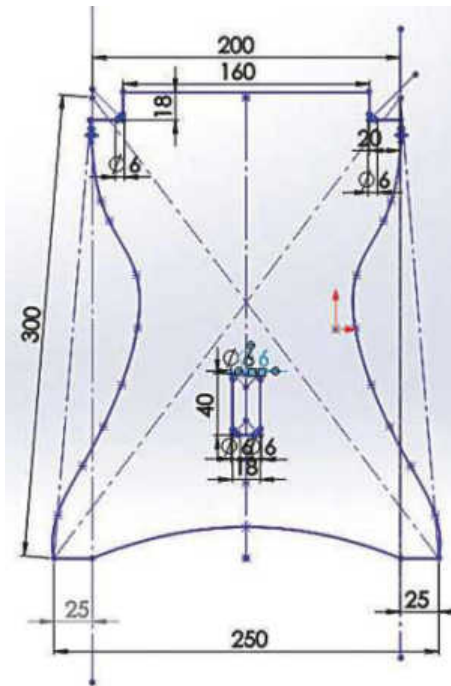
The side has been constructed to have the same width at its base as the top of the stool (**Pic.3**) This is a medium step-stool so a step height of 300mm has been used. This can be adjusted for taller stools. The slot in the middle of the side accepts the cross-member mortise. The top edge of the side panel becomes a mortise in its own right into the top



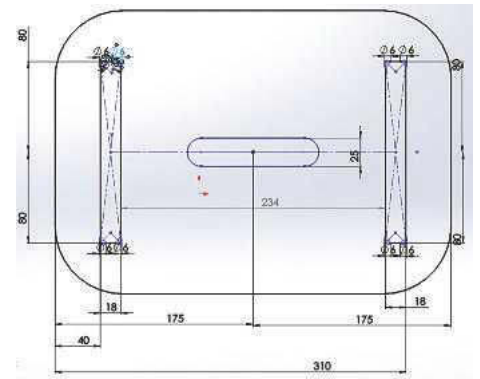
**PIC 1.** You will need to use a 6 × 18.5mm straight mill router cutter



PIC 2. The mortise is created in CAD



PIC 3. The side is developed...



PIC 4. ... followed by the top

of the stool. All of the internal corners have the 5mm recessed fillet.

The overall size of the top is 350 × 250mm. Not a very comfortable sitting size but ideal as a step-stool to retrieve something out of a tall cupboard (Pic.4).

The slots in the top are now designed. The two slots either side have the 5mm recessed fillets for the side mortise joint. The centre hand slot does not have any recessed fillets but a simple 9mm tangent fillet to make it easier to hold. Finally, the cross-member and the peg are designed, based on the dimensions set out in the side and the top.

The stool is assembled in the CAD system to ensure all the joints work correctly. There are always some that are not quite right, thanks to operator error! The individual components are saved in dxf format for transferring to the CAM system (Pic.5).

### Configuring the CAM software

The components are imported into the CAM system (Pic.6); this system will translate the CAD design into instructions for the CNC router to machine the item. I am using the popular ArtCAM software from UK-based DelCAM, which is very powerful and user-friendly.

The stool nesting has been designed to fit into a 600 × 600mm size sheet of 18mm plywood – the size of my CNC baseboard. The toolpaths are straightforward: an internal profile toolpath to cut out the slots, and an external profile toolpath to cut out the components. All the cutting will be carried out with the one 6 × 18.5mm straight mill router cutter. The CAM system has specified 'climb' for the cutter to give a much cleaner cut with the plywood. The outer toolpath contains 'bridges' to ensure the components don't move on the final pass.

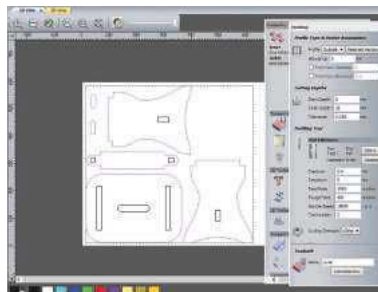
My CNC is happy to cut at 15,000rpm with a feed rate of between 600mm/min (internal) and 1,000mm/min (outside) profiles for this 6mm router. I am using a step down of 5mm. These settings will depend on the capabilities of your machine. If the router cutter is running too fast or the feed rate is set too slow, it could burn the plywood. The toolpaths are saved as separate files for flexibility; they can be saved in a single file as there is no tool change.

### Machining the stool

The toolpaths are loaded into the CNC machine control software (Pic.7). My CNC uses the Mach3 software, >



PIC 5. The completed design rendered in CAD



PIC 6. The design is transferred to the CAM system



PIC 7. The file is loaded into Mach3

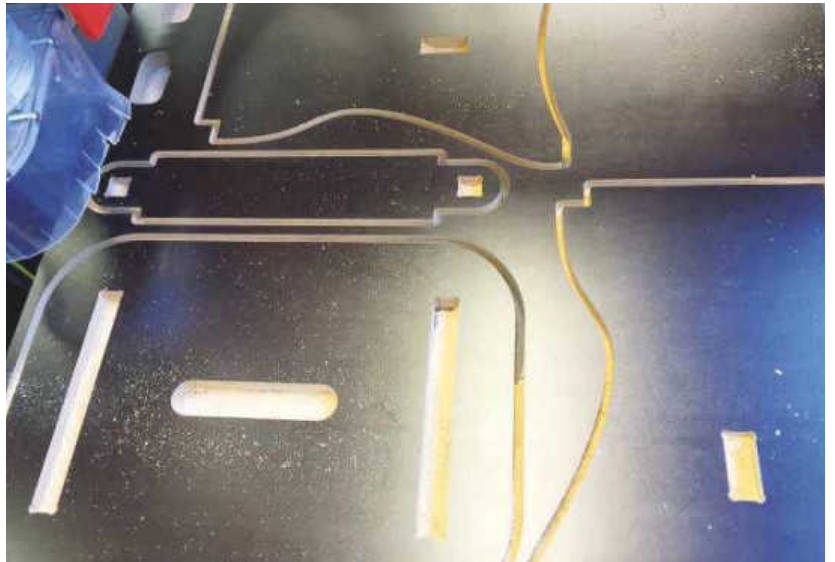


PIC 8. The start-point is zeroed using a remote controller

which is a popular universal control system. The material is then loaded on to the CNC bed. In my case I have a vacuum bed, so I use a piece of sacrificial 13mm MDF sheet under the plywood; this enables my router to overcut the depth by, say, 1mm to ensure a clean cut on the underside. The plywood for machining is then fitted to the vacuum table. There is no need to glue it down as the pieces are large enough to stay put when machining.

The 6mm straight router is inserted in the collet. With the vacuum turned on, the top of the lower left corner of the material to be machined is set up to be the zero axis position.

I use a remote controller, which allows me the freedom to lower the router bit until it just touches the top of the surface material. The slots are machined first of all and then the outside profiles. Bridges have been added to locate the outside profiles from moving on the last pass (**Pic.9**).



PIC 9. The profiles are machined by the CNC

### Assembly

The side wedges for the tenons are tapped into place to secure the sides (**Pic.10**). The wedges for the top are cut from ebony to match the black surface finish (**Pic.11**). The ebony wedges are then inserted in the top tenon to pinch it tight in the mortise; the recessed fillets hardly show on the assembled stool. The project is now finished and should look something like that shown in **Pic.12**. **GW**

### ABOUT THE AUTHOR

Dennis Keeling progressed from segmented turning to CNC routing after completing a course at Bucks new University in Furniture Design. He has self-published his CNC projects and a copy of this design in dxf format is available on his website: [www.denniskeeling.com/downloads](http://www.denniskeeling.com/downloads)



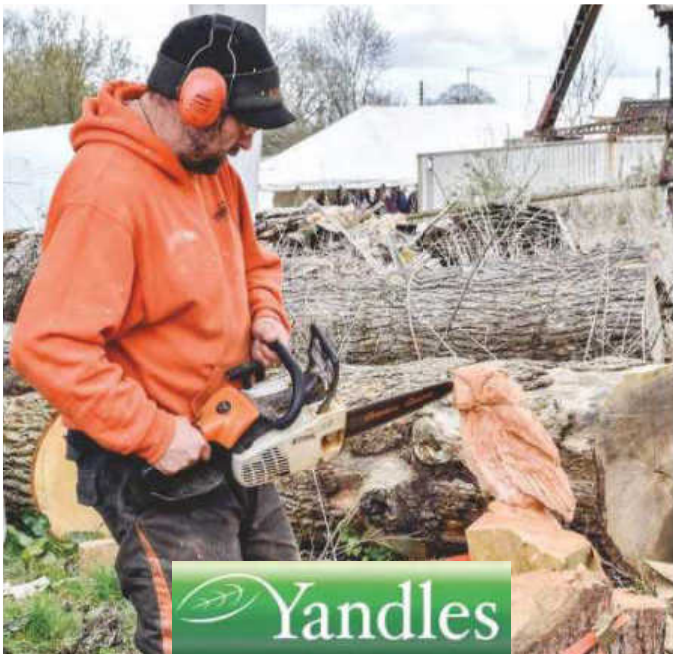
PIC 10. The tenons are tapped into position



PIC 11. The wedges are cut ready



PIC 12. The finished stool should look something like this



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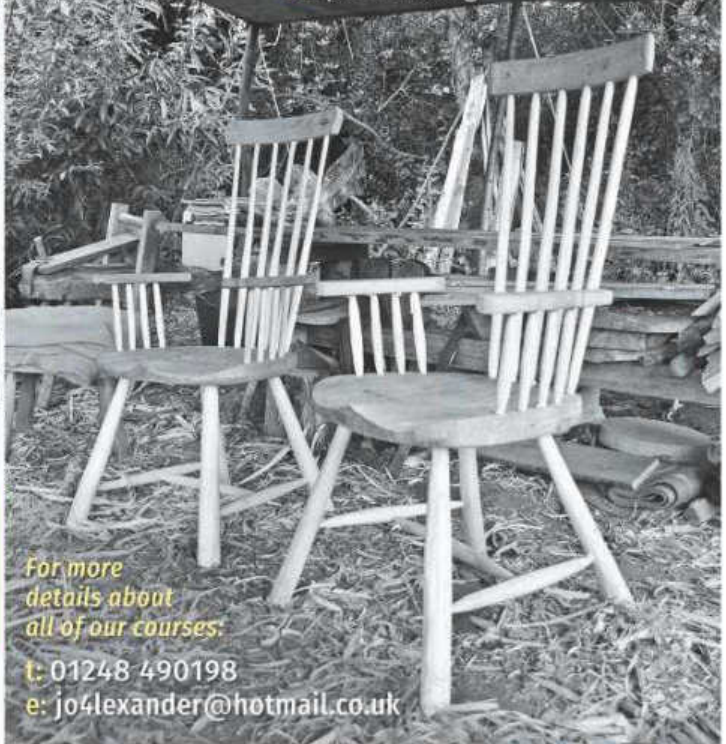


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## AROUND THE HOUSE with Phil Davy



**I**t was only a pair of simple steel butt hinges, but the variation in price was astonishing. Required for renovating a casement window before stripping and repainting it, I didn't need anything fancy. At one well-known trade counter a pair of these hinges would cost the princely sum of 49p, but a few hundred metres along the road the same product was £3.69, more than seven times the price! If you have the time, it certainly does pay to shop around, especially if you're fortunate enough to have stores such as Wickes, B&Q or Screwfix in the vicinity. I'll leave you to work out which was the cheaper store...

### SHED WATCH B&Q timber

Woodworkers visiting B&Q's huge Cribbs Causeway store at Bristol will probably be pleasantly surprised to find a new source of decent timber. For what is possibly the first time, the retail colossus is stocking a limited quantity of hardwood, predominantly European oak. As well as planed waney-edge and square-edge boards, I noticed 250 x 45mm-thick turning blanks in beech, ash and oak. At £15 a time these are pricier than most specialist timber suppliers, but then how many stockists are bang next to the M5 motorway? There were no turning tools or lathes on display, though.

Waney-edge oak started at £9 for 240 x 400mm long offcuts, while similar width 1,220mm length boards were priced at £28. Square-edge timber was priced at £42 for a 1,850mm piece of similar width, with half length boards also available. There only appeared to be one thickness (25mm), and some boards were barely planed on one surface. I spotted a few clean quartersawn boards, though.



In the next rack was a quantity of rather nice, defect-free redwood. Described as Daymark clear pine, the assorted sizes were only slightly more expensive than regular softwood grades.

### Big box store

Recently reopened as a B&Q big box store (whatever that means), the Cribbs Causeway venue is one of just four across Europe to trial a new concept in DIY shopping. Basically, this includes everything you need from raw materials to finished item, including a few pieces of furniture and plenty of home furnishings. To be honest, I didn't notice much that was different from the old B&Q Warehouse format, though admittedly it's been a while since visiting this particular branch. There actually seemed to be fewer professional power tools on sale, with no obvious demo areas, either. It was good to see the return of the café, though. Long time GW readers may remember we compared DIY shed dining experiences many years ago, when most major stores had such a facility. I feel a return visit must be due soon...



## SUMMER PROJECT – CD SHELVES

**TAKES:** One weekend

**TOOLS NEEDED:** Mitre saw, biscuit joiner, jigsaw, sander, drill stand, drill/driver, bench plane

# Pop classic

Does **Phil Davy's** CD and DVD shelving reflect his taste in music? Timeless, with a bit of classical thrown in?

**A**lthough CD sales are on the decline, I suspect many of us still have large collections that we're reluctant to part with. Come to think of it, I've still got plenty of vinyl, too. Unlike digital music files, which obviously take up no physical space, you at least get some artwork with most CDs, not to mention those all important lyric sheets. I've no intention of parting with my collection in the near future, so making somewhere to store them is possibly one of the most frequent project requests from family and friends. A couple of basic shelves will do the trick, or you can choose to make something slightly more attractive. Of course, you can pull out all the stops and use exotic hardwoods to make a piece of furniture.

Because of cost and time constraints I used PAR softwood for this project. MDF would be just as good if you're happy using the stuff.



**STEP 1.** Mark the timber to size and cut. Top and bottom should be to exact length, with shelves a tad shorter



**STEP 2.** Either use a flexible curve or draw freehand the shape at the lower ends of both sides



Construction needs to be sturdy, as three full rows of CDs are pretty heavy. Making the two middle shelves adjustable means you can position them for either CDs or DVDs, changing from one to another as you wish. It also makes painting the inside slightly easier, too. Using the dimensions shown, you'll be able to accommodate either three rows of CDs (up to 200 in total) or two rows of DVDs.

### Matchboard back

Instead of MDF for the back I decided to use thin matchboard (T&G). The thinnest stuff is only 8mm-thick, which tends to warp as soon as you look at it... If weight wasn't an issue I'd use 15mm-thick matchboard instead, but this would mean increasing carcass depth as well. Whatever thickness you use, matchboard should only be nailed into the rebates and not glued. Don't cramp them together so that they're too tight, either.

I can see it becoming a bit of a trademark with my projects, but I added decorative trefoils to the upper rail, using a 15mm Forstner bit. Although

straightforward, they can be awkward to get just right if you've never cut them before. Practice on offcuts first (see Around the House GW259). As well as being attractive, they enable you to insert screws easily through the rear rail into the wall. Because of the considerable weight you'll either need an extra screw in the middle of this rail, or two through the bottom rail, which would then need to be concealed. Use a right-angle screwdriver attachment to drive in any screws where access is tricky.

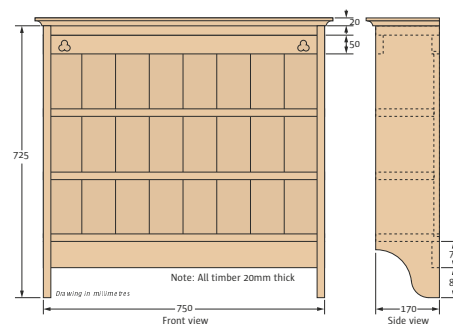


FIG 1. CD shelves

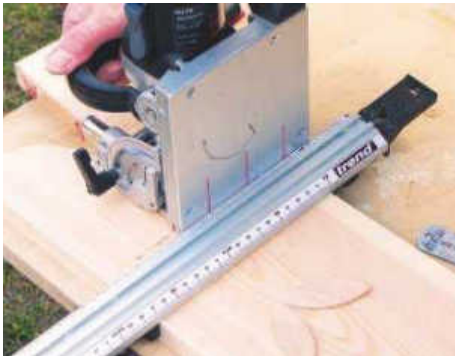


**STEP 3.** Using a narrow jigsaw blade, carefully cut around the curves on the waste side of the line



**STEP 4.** Cramp the two sides together and clean up the sawn curves with a sanding drum mounted in a drill stand





STEP 5. The top, bottom and sides are joined together with No.20 biscuits. Mark out and cut slots with a jointer



STEP 6. Calculate shelf positions so that spacing between them is uniform. Drill 5mm holes for the push-fit supports



STEP 7. Rout rebates along rear edges for the matchboard. Rebates do not run full length on the side panels



STEP 8. Check the matchboard is a snug fit in the rebates. This will be neater if slightly inset



STEP 9. Dry assemble the carcass to check everything fits correctly, then glue up with sash cramps, checking for square



STEP 10. When the glue has dried, plane the end-grain flush at the top of both side panels



STEP 11. True up front and rear edges as necessary, taking care not to overrun with the plane and cause break-out



STEP 12. The upper and lower aprons all feature decorative beading. Rout this carefully with a bearing-guided cutter



STEP 13. Upper and lower aprons are also fitted with biscuits. Sand the face sides before gluing in place



STEP 14. Set out the trefoils if required. Cramp an offcut underneath the apron and bore holes using the drill stand



STEP 15. Lay out the matchboard and cut both outer pieces to width if necessary. Pre-drill nail holes to prevent splitting



STEP 16. Mitre, glue and screw 20 x 20mm blocks around the top of the carcass to support the coving

### SUMMER PROJECT – CD SHELVES (continued)



**STEP 17.** Add simple coving with 20mm scotia. Mark the front piece carefully and mitre the ends, pre-drilling holes to prevent splits



**STEP 18.** Fit the front coving with panel pins, then saw mitres on both side pieces. Next, punch and fill any pin holes



**STEP 19.** Mark the shelf depth and saw both pieces to width. You may need to trim the ends if too tight



**STEP 20.** Cramp both shelves together and plane the sawn edges for accuracy. Sand faces and remove arrises



**STEP 21.** Fill nail holes and any defects. Sand all surfaces with 120 grit abrasive or finer, before dusting down



**STEP 22.** Stain, varnish or paint the shelf unit. I decided to brush on two coats of General Finishes Milk Paint



**STEP 23.** Support the unit and mark wall for fixing, checking for level. Drill and insert plugs for screws



**STEP 24.** Check the unit is fixed solidly before loading up shelves. Use 5.0mm screws for fixing



## OUT & ABOUT RYOBI retrospective

There seems to be no shortage of innovations when it comes to tool giant Ryobi. Their annual conference offers a sneak peek at what's ahead in the world of consumer power tools and outdoor products, and the 2016 event had plenty in store. Interestingly, Ryobi are not afraid to delay a new item until it's been tweaked or improved. As an example, we saw a prototype of their unique multi-tool with tilting head last year, though I was told the launch has since been postponed until the product has been perfected.

There's generally an element of fun built into such events, and this time Andy and I were treated to the delights of Mercedes-Benz World

**FURTHER INFO**

To find out more about Ryobi and their upcoming tool releases, visit their website: [uk.ryobitools.eu](http://uk.ryobitools.eu)

at Brooklands, Surrey. Gorgeous F1 cars and historic vehicles in the stunning museum, with the chance to take an AMG V8 performance car for a spin or two out on the track, literally. Then it was tackling the off-road course in a Mercedes 4x4, complete with a couple of oblivious ducks and dozing fox! Thankfully, Andy's driving skills had calmed down by the time we headed home along the M4. Not sure about mine, though...

**Cordless newcomers**

So, what can we expect to see in the stores over the next 12 to 18 months? Not surprisingly, the focus was on the ever-expanding 18V One Plus

range of cordless tools. With more than 40 products that can each operate from the same battery platform, you'd think there's almost nothing left to invent... But still the ideas keep coming, which is great news for woodworkers on a limited budget but who still demand reliability and performance.

Brushless motors are hot news, with a circular saw, impact driver and angle grinder joining the combi drill we tested recently (see GW306). Not only are these power tools more efficient than their brushed-motor equivalents, they're more compact with longer run time. The impact driver features three-speeds, selected via a push >



Warm up to this year's Ryobi conference was held at Mercedes-Benz World, at Brooklands, Surrey

button, plus a depth setting specifically for decking screws.

Several manufacturers have one or two cordless sanders in their line-up, but I reckon Ryobi are probably the first to launch a battery belt sander. Those of you who remember *Good Woodworking's* belt sander racing at various shows in the past will appreciate the lack of a cable on this particular power tool! We'll be testing their new cordless palm and orbital sanders over the next few months, so keep an eye out for these neat products.

### Battery technology

Although it's been part of Ryobi Australia's

product range for some time, a cordless laminate trimmer should be heading to Britain sometime soon. This little 1/4in router will make life so much easier for tasks such as running a profile along an edge, without the hassle of a mains cable getting in the way.

Andy and I were pretty impressed by a prototype sliding mitre saw, too. Powered by two 18V batteries, the twin rail design means there's minimal distance required behind the saw, often a problem in a cramped workshop. With capacity and performance similar to a 240V saw, this is a serious machine.

Just when you thought that 18V Li-ion batteries had reached their peak in terms of capacity with

the One Plus 5.0Ah pack, along comes a handful of even beefier units. Rated at 6.0Ah and a whopping 9.0Ah, these High Energy batteries are intended for high-drain equipment, such as the cordless mitre saw and circular saw. There's a High Energy 3.0Ah version too, and all feature the familiar push-button LED fuel gauge display. Don't expect these batteries to be cheap, but their appetite for work is likely to be huge.

Of course, Ryobi events are not entirely about woodworking kit. We spotted a couple of powerful pressure washers, along with improved garden blowers, lawn mowers and so on. Plenty to look forward to from the vivid green technology innovators, then! **GW**



Brushless motors are hot news, with a circular saw, impact driver and angle grinder soon becoming available



The impact driver features three-speeds, selected via a push button, plus a depth setting specifically for decking screws



The new cordless battery belt sander could well be the first of its kind



A cordless laminate trimmer should be heading to Britain sometime soon



Although a prototype, this sliding mitre saw will run on two 18A batteries



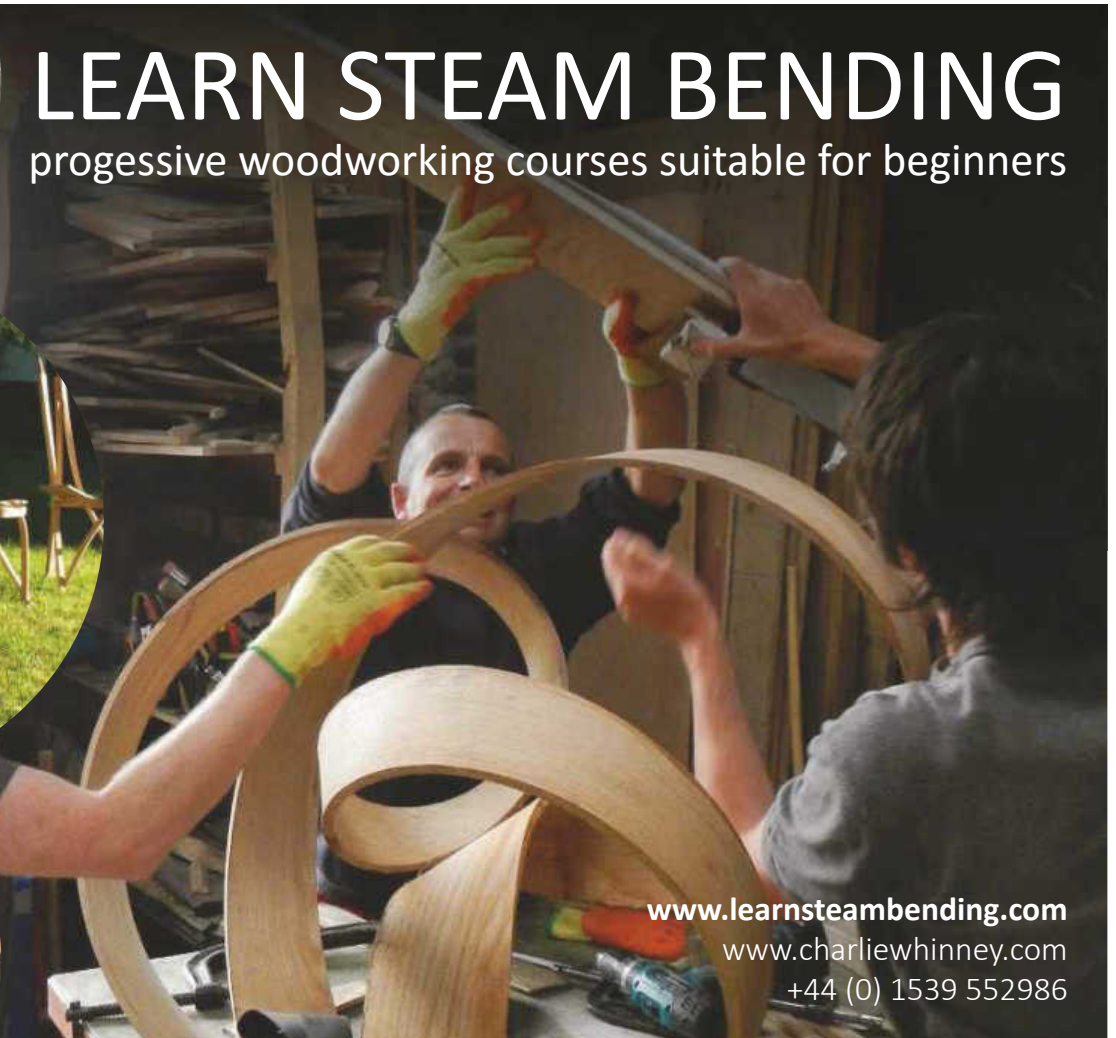
Just when you thought that 18V Li-ion batteries had reached their peak in terms of capacity with the One Plus 5.0Ah pack, along comes a handful of even beefier units



Among the woodworking kit, we also spotted a pair of futuristic pressure washers

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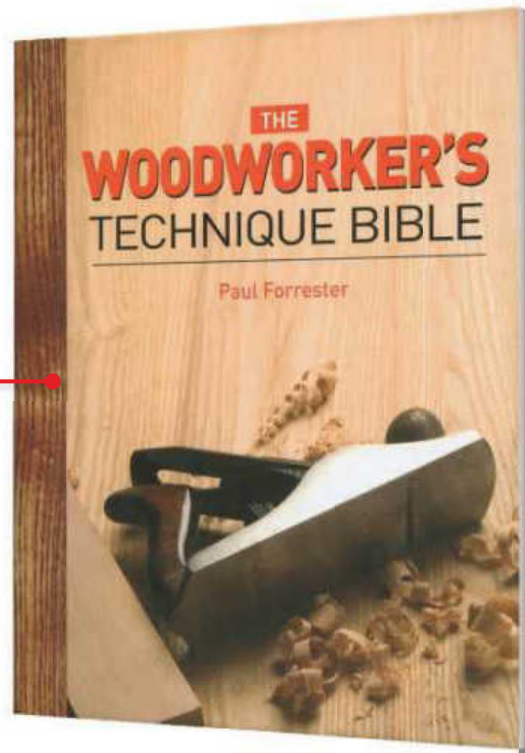
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# Burrry nice vases

Deciding to utilise some of the offcuts in his timber pile, **Les Thorne** uses various pieces of burr oak to create two different vase shapes: one with and one without detailing



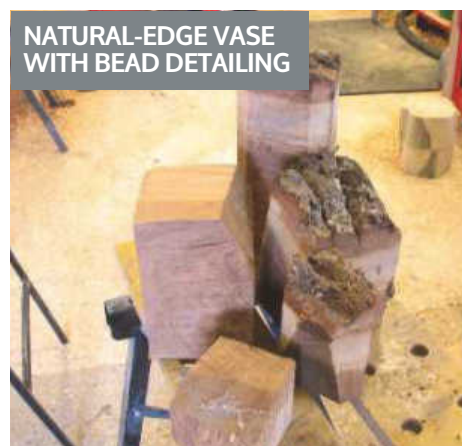
Once you've been working with wood for a while, you'll find yourself having amassed a collection of timber that "might come in handy one day."

My personal favourite timber is burr oak and I have been working with it for many years. When I cut blanks for larger bowls and vessels, I will always end up with lots of odd shapes. These may not be perfect pippy burrs, and the grain may not be going in the desired direction, but I cannot seem to get rid of them.

This month's article addresses this stock pile and I decided to cut up one of these odd blocks and use it to make a couple of different projects. When cutting up blocks that are uneven, be

careful when using the bandsaw and always ensure that the timber is held firmly; this will stop it wobbling or jumping while being cut. I have found that a 3tpi blade is ideal for this type of wood, especially if there is any moisture present. Watch out for any grit or stones in the rough bark of the oak as these can instantly blunt your bandsaw. I tend not to worry about what direction the grain is going in; I just fit my project to the blanks that are cut out. The bark on the oak will normally stay intact during the drying process, but on other species you may need to be careful during the cutting process to ensure that the natural bark edge does not become loose or detach completely. **GW**

## NATURAL-EDGE VASE WITH BEAD DETAILING



**STEP 1.** This is what I was left with after cutting up a misshapen piece of burr oak: blocks from 75mm square up to 200 x 80mm. The grain direction on these should make for some interesting turnings – let's find out!





**STEP 2.** To begin, mount your first block up between centres. Driving off bark is never effective so I recommend drilling a hole in the bark top so the drive centre will locate onto the solid wood



**STEP 3.** At the tailstock end, mark a circle that will end up as your diameter; this will give you an idea of the maximum you can get out of the piece of wood you're using



**STEP 4.** The grain on this piece is running perpendicular to the lathe bed so a bowl gouge will be more effective in roughing it down than any other tool. Working from the left to the right will allow you to keep the bark intact



**STEP 5.** As expected, I discovered some cracks in the wood; this isn't unusual on burr oak and unless the turning becomes dangerous, I would suggest ignoring the splits towards the bottom



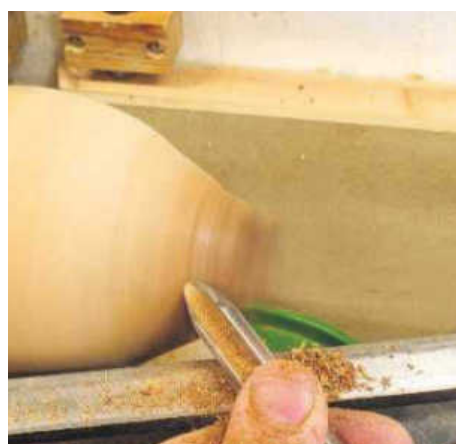
**STEP 6.** Holding one end on the chuck will allow you to hollow out the inside. You want to have the smallest spigot that your chuck will allow as this will give you a better curve at the bottom of the piece



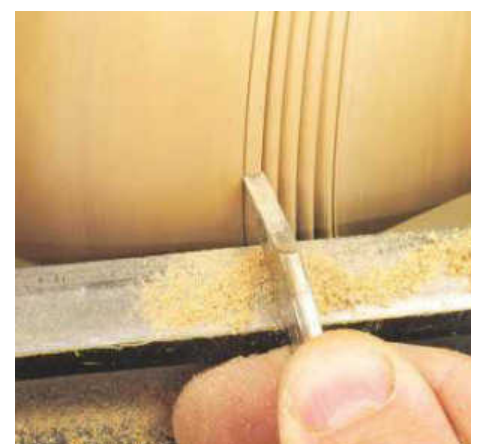
**STEP 7.** Even though it's against the grain, I found that a push cut with the bevel in contact with the timber makes for a good cut. The strength of the 10mm bowl gouge allows me to work easily up to 50mm off the toolrest



**STEP 8.** You might find it easier to refine the shape with a shear cut. To do this, roll the gouge over so the flute is pointing towards 3 o'clock. Use the bottom wing of the tool and pull the tool towards you to create a super-fine shaving



**STEP 9.** Once the piece is mounted in your chuck, you can begin shaping the top. Use a 13mm spindle gouge to create a simple flowing curve from the bark edge downwards



**STEP 10.** To add some interest to the vessel and to distract the eye from the splits, try adding a bead to the bottom section. The Ashley Iles beading-forming tool will cut accurate beads all the way around the work



STEP 11. The problem with a bead scraper is that if the timber is a bit 'carroty', then they can break out, as they've done here. If you experience this, work on it later; see it as a texture rather than a problem



STEP 12. Whenever you are working blind inside a piece, I recommend drilling a depth hole; this will allow the tool to work from the centre out without having to worry about removing the slow timber in the middle



STEP 13. The Simon Hope hollowing tool is the best tool that I have found for doing this type of work. The small diameter cutter combined with the thick shaft makes the tool an absolute dream to use



STEP 14. Your stance is very important when using a hollowing tool. Swivelling the head on the lathe means that you haven't got to lean over the bed, which could make the whole process rather uncomfortable



STEP 15. Trying to work out the position of the cutter while you are inside the work is never easy. The markings on the top show the cutter pointing at 12 o'clock (dotted line) and the optimum position of cutting (solid line)



STEP 16. The tool should be worked sideways into the piece – try to establish a rhythm. Be really careful when bringing the tool in and out of the piece as you don't want to catch the fragile bark edge at this stage



STEP 17. I have seen many ways of removing the shavings/dust from inside a piece, including methods such as spoons, vacuum cleaners and even straws. Compressed air works the best – just watch your eyes as it ejects from the opening



STEP 18. I feared this might happen: as I wanted to turn the piece thin, the depth of the bark was likely to cause a problem. A split has appeared and will need to be repaired if I want to keep the top intact



STEP 19. Even though it's the best product for repairing cracks, I don't often use superglue in the workshop as I tend to glue myself together rather than the project! I use the thin version for the small cracks and then the medium one for larger cracks



**STEP 20.** It's time to clean up the beads before we go too thin. The soft brass brush in the drill will smooth up the rough areas. Don't worry if you knock off some of the wood; this just adds texture



**STEP 21.** Measuring the wall thickness will require some specialist callipers once you go past finger depth. The spring-loaded ones from Veritas are fantastic, albeit expensive



**STEP 22.** The inside ought to be finished to the best of your ability, and a small teardrop scraper is perfect for this. Speed up the lathe and take light smoothing cuts, being careful not to catch the top edge as you work



**STEP 23.** This little hook-and-loop sanding ball is fantastic for sanding the inside. The abrasive needs to be cut like a flower petal and then just wrapped around the ball



**STEP 24.** The important thing when sanding the inside of a piece like this is to not let go of the shaft. I also like to put the ball inside before I start the lathe and stop the machine before removing it



**STEP 25.** The chucking point is best removed between centres. As I have swivelled the head of the lathe for the hollowing, I need to make sure they are now perfectly aligned



**STEP 26.** The bark edge dictates that I can't drive the piece off the top. This stem that locates in the bottom will allow me to mount the work up. A piece of abrasive on the end will prevent it from marking the inside

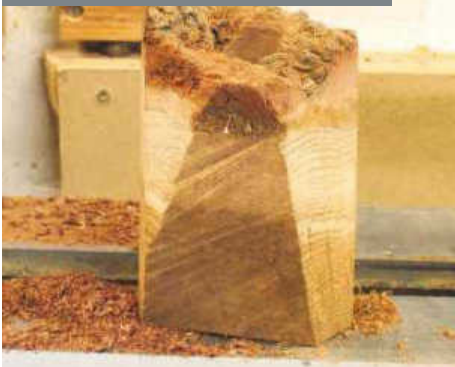


**STEP 27.** A small tool and small cuts are the order of the day here. What you don't want to do at this stage is to experience a dig in. There will be short-grain in the foot so don't go too thin. The last bit can easily be finished by hand



**STEP 28.** The completed natural-edge vase with bead detailing should look something like this

A SIMPLE NATURAL-EDGE VASE



**STEP 1.** This is probably the easier of the two pieces. The blank I used had a large flat that will be turned away during the shaping process. As before, make a hole at the top to accept the drive



**STEP 2.** The first job is to make the top round; this is where the largest diameter is on this shape. I have a small hole left just underneath the bark but I think I will get away with that



**STEP 3.** Once the diameter is fixed it's a matter of turning away the wood until the flat disappears. You're looking for a simple shallow curve from the bottom to the top, and the final shaping will be done when the hollowing is completed



**STEP 4.** With a chucking spigot turned, remount the piece in the chuck and drill your depth hole as before. These steps are the same as for turning the inside of a vessel; they will give you a guide as to where you are inside the piece. This is great practice for when you can't see what you're doing



**STEP 5.** This mark on the outside shows the position of the cutter inside the work. Until you can visualise this it will be impossible for you to be able to make hollowed vessels consistently



**STEP 6.** Once you're happy with the inside shape, remount it between centres and bring the outside down to your required shape. I find it easier to match the outside to the inside rather than the other way round



**STEP 7.** A simple curve like this is best sanded with the abrasive held on a wooden block; this stops your fingers from putting undesired dips in the surface. It will also stop you from rounding over the bark edge



**STEP 8.** After sanding and applying a coat of lacquer, it's a nice idea to sign your work. A good quality pyrography machine is ideal for this: adjust the temperature of the wire to suit the size of the writing you're doing



**STEP 9.** The completed simple natural-edge vase should look something like this

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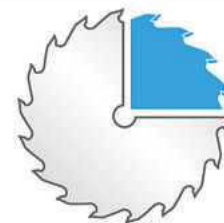
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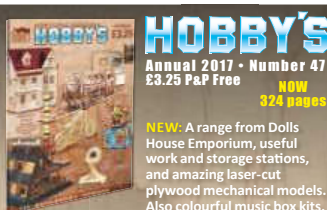
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# Next month

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Barrie Scott speaks frankly about the trials and tribulations of being a joiner on the job



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We find out more about designer, artist and master craftsman Scott E. Armstrong



#### ⬆️ SAW SENSE – PART 2

Peter Bishop moves on to looking at static, fixed-bed power saws

PLUS: ANDY KING ➔ TOOLS & TIPS FOR MARKING WOOD ➔ WALNUT BOX WITH ALUMINIUM SPLINES

# BANDSAW BLUES

As **Michael Huntley** rightly says, if you can afford to buy the biggest and best available, then this really does pay dividends when it comes to bandsaws, which can cause all sorts of headaches, as he discovered!

**W**ho is me! Trouble with the bandsaw. I should have known better at my age! Here is a good bandsaw tip for you: if you have a blade type that works, then don't try and change it. My bandsaw is old. Not as old as it could be, but old enough for spare parts to be getting rare, even on the internet. Things are gradually falling off it with regularity or getting stuck. Not unsafely, but just enough for me to need to be aware and have the right size spanner actually hanging on a nearby nail rather than putting it away each time after using it.

## Buy the best you can

A bandsaw is probably the first machine that a woodworker needs to buy. Having a bandsaw makes a big difference to your workshop life. Get the biggest and best that you can afford. I would almost go so far as to say, don't buy a second-hand machine unless you live near a good second-hand machinery specialist who can keep it going when things get stuck. Mine was second-hand but not purchased; it came in a workshop clearance when the previous owner died. His family just wanted everything out, so it ended up in my workshop. It was OK but just not the one I would have chosen.

## Blade guides

I discovered that blade guides are not that important. Shock horror! Getting a straight cut is not dependent on the blade guide. A straight cut is dependent on a sharp blade (which technically should be called a 'saw') and on even teeth and set - just like a hand saw. When my blade guides wore down and I couldn't replace them, I discovered that I could get straight cuts without them. But I

was using more blades. There is little more delightful than using the bandsaw when you have just fitted a new blade - it cuts like a dream; that is until the tyre perishes.

## False economies

Bandsaw wheels have rubber tyres, and fortunately I could still get a new tyre. With the aid of hot water and bicycle tyre levers, I was able to get the new tyre on. The bearing was checked - no graunching - so the wheel was re-fitted. Everything worked fine for a while, then the other tyre went. Same solution, and all was OK. Then my blade supplier put their prices up. There was no real reason for me to change to a smaller (and cheaper) blade, but I did. So the thrust roller had to be re-set. I got it all set up but the old girl didn't like change and finally called it a day. Then the thrust roller decided to seize, and I cannot get a new one! I saved £2 by buying a 10mm instead of a 12mm blade. I now have to spend £750 on a new saw! Don't change a working setup and don't be tempted by false economies. Mind you, a new bandsaw will be nice... **GW**



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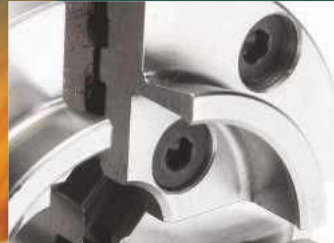
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